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ORIGINAL ARTICLES.

THE TREATMENT OF FRACTURES.

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WHILE many changes and many advances have been made in modern surgery, it is somewhat surprising, at first glance, to see how little has been the change in that part of it devoted to the treatment of fractures. This surely cannot be because other branches are of more importance, and consequently attract more attention and investigation, for this is almost the only ground on which physicians and surgeons meet on an absolutely neutral plane. The treatment of fractures is of as vital importance to the physician as to the surgeon; indeed, it is, perhaps, most frequent that the physician is called upon in emergencies of this character. Every one who professes to be a doctor, no matter what his specialty, is supposed to be able at least to mend a broken bone. Both the physician and the surgeon have been more frequently called to answer suits for malpractice resulting from the treatment of fractures than from any other cause, and while other operations bring much higher recompense, few are capable of bringing heavier losses. Thus, it would seem that if from no other consideration than a pecuniary one, the correct treatment of fractures would have become a study second in importance almost to none.

A badly managed case of pneumonia or typhoid may never live to complain, and an unsuccessful case of operation for strangulated hernia or for an inflamed appendix may join the silent throng, and leave behind but few to cavil at the physician's skill; but a badly managed fracture, with its deformity or impaired usefulness of limb, will stalk through the neighborhood and through the streets, threatening its unfortunate author, defaming his character, ridiculing with its mute witness his skill, and detracting by its persistent propinquity from his reputation not only as a bone-setter but as a physician or surgeon. The reason for this lack of progress is because the indications for the treatment of fractures have been so long known, so definitely and positively demonstrated, that little can be added. It is true that more or less varied means have been devised to meet these indications, but they have, after all, differed but little in principle. The mechanical genius and enthusiasm of some have given us many varieties of splints, but they were all practically made to fill the same indications, and succeeded in this aim about as well as those of less imposing curves and more modest pretensions.

The indications for the treatment of fractures are briefly as follows: Reduce the fragments to their proper places; retain them in position; combat inflammation; restore function; relieve pain.

I shall take up the several indications in turn. First, reduce the fragments to their proper place.

At once the question arises, When should this be done? Is it best to extemporize something at the scene of the accident, or is it best to wait until the patient is at the office, or his home, or in the hospital? Obviously this depends largely upon the nature of the fracture. An uncomplicated fracture of the radius or ulna, or one of the tibia, may often be promptly adjusted and held in place by the most simple of extemporaneous splints, but, generally speaking, it is best to wait till the surroundings are more favorable for efficient work; particularly is this the case in fractures of the femur or of any bones in which the break extends into a joint. There should, however, always be a provisional splint or support applied before the patient is moved. Even without the reduction of the deformity, the support of a straight board, or shingle, or pillow, or layers of pasteboard, or the many other devices that may be at hand, will give immense relief to the sufferer, and perhaps prevent the fragments from perforating the skin, or from lacerating still more the already goaded muscles. It is often surprising to find with what facility and freedom from pain an unadjusted fracture may be handled and the patient moved when supported by the rude contrivance we may find at hand.

Again, the question of time may present itself in another light. Suppose the limb is swollen, its normal outlines lost, and the pain intense. Should an attempt be made to adjust the fragments, or should the limb be left without support of splints, and simply treated with local applications to reduce inflammation, in hopes that when this subsides a better reduction may be accomplished? There can be little question in many of these cases that the reduction of inflammation becomes the all-important indication, but we must remember that the most important thing in the treatment of acute inflamma-

tion is rest; without it local applications of heat or cold, or arnica, or lead and opium, can but prove unsatisfactory. And how are we to obtain rest? Surely the simple laying of a limb upon a pillow will not suffice. The slightest move of the patient, the incautious meddling of the attendant, may send the jagged ends of bone into the tortured tissues, and add new fuel to the flames already burning.

I believe that these cases demand splints. I grant that it is often impossible to restore the fragments to their natural position, except under chloroform, and in these cases an anesthetic is nearly always needed, but the limb can be nearly straightened, the muscles can be put in a position favorable to decrease of tension, a crushed joint may be put at rest; retention-splints can be gently applied, the limb elevated, and then, if you choose, local applications to reduce inflammation may be applied. I say, if you choose, because in my own experience it has been comparatively infrequent that other means than rest and elevation have been demanded.

"The reduction of fragments to their proper places" appears best on paper or in text-books; what we actually do is to restore as nearly as possible the normal outlines of the parts, and while this result is most frequently obtained, yet the actual restoration of the fragments to their normal relations is, I presume, of rare occurrence, except possibly in transverse fractures.

The general principle underlying the reduction of deformity caused by fracture is that of extension and counter-extension, and I have not infrequently heard both physicians and patients tell how hard a pull it was, or how many it took to get the bone straight, and of the exquisite anguish suffered by the patient while this torture was going on. I must confess I cannot understand why this should be. It would seem that in these cases, in which extreme suffering has made the muscles tensely contracted, it would be far better to give chloroform; under its soothing influence the muscles relax, and a formidable operation is converted into a simple moulding of parts into their normal relations. I believe that the more general use of chloroform would lead to better results in the treatment of fractures, for under its influence, particularly in fractures involving joints, the exact lesion is more readily made out and more accurately adjusted, and it may be well to draw attention here to the fact that when once properly reduced the tendency to displacement subsequently is but slight.

Aside from the danger attached to all anesthetics there is but one objection to the use of chloroform, and in the hands of the thoughtful or careful physician or surgeon even this does not hold; this is a tendency to too much manipulation because the patient does not feel it. We must remember that, even though unconscious, every motion of the rough ends of bone may be lacerating nerves, arteries, or muscles, therefore the least possible manipulation under any circumstance is most desirable.

It is upon the second indication for the treatment of fractures, that of maintaining the fragments in position, that the ingenuity and thought of our profession have been bestowed. For generations books have teemed with the devices of mechanics turned doctors or doctors turned mechanics, and well may we of to-day congratulate ourselves that these formidable creations of the past, however well they may have filled the indications in the hands of their inventors, are no longer considered a necessary part of our armamentarium. If there has been any advance in this part of the treatment of fractures, it has been in the return to a more simple means of maintaining the reduction of the fractures.

The invention of new splints and the naming of them after their ambitious inventors are deservingly falling into desuetude, and a splint made with projections and depressions, curves and angles to fit broken bones deeply seated or surrounded with soft tissues no longer appeals to the judgment of the physician or reaps harvests for the maker. Strips of basswood and "Buck's extension" will suffice, even in the hands of one who is not a mechanic, to treat almost any fracture except those involving joints, and even these when not amenable to treatment in the extended position are best treated by the simplest and least complicated of angular splints.

One cardinal principle must obtain, and that is, having decided the best position for the limb, to use that splint, whether internal or external, anterior or posterior, dorsal, palmar, or lateral, that best holds the fragments in the desired position, and no preconceived notion should make us use a certain form of splint when another will better fulfil the indication.

In regard to fixed dressings, for example those of plaster, I have but a few words to say. Unless the injury to the soft parts is very slight, and unless the parts can be quite accurately coaptated, and unless, further, the case can be under very close observation for the first week or ten days, I am wholly opposed to their use. The danger of gangrene from pressure in an acutely swollen leg, or the displacement of fragments as the swelling subsides, makes their disadvantage very serious, and whatever good results may have been obtained by those who use them, it yet remains to be shown that the non-permanent method is not safer, and its results not so good or better.

Meddlesome interference with fractures is to be deprecated, but still more are we to censure that fear or lack of knowledge that permits the splints as first applied to remain on indefinitely till union is

accomplished. I have seen numerous instances in which, rather than disturb a fancied good setting, the limb has swollen about the splint, intense pain has supervened, and yet as long as vitality showed itself in finger-tips or toes the splints remained, till finally, when at last removed, a decubitus had formed extending down to the bone or tendons, or a tendo-synovitis established that has perhaps almost permanently impaired the use of the limb.

A fracture perfectly set shows but little tendency ordinarily to be again displaced, so that with average care the splints can be removed on the first or second day and the adjustment corrected or verified without pain or danger to the patient, and this, I believe, should, with few exceptions, be a routine practice. It is to be remembered that at about the end of the first week actual repair begins, and we should be certain before this time that the fragments are in the position that we desire them to be when union is completed.

Closely allied to the maintenance of fragments in position is the combating of inflammation. One of the greatest aids to this end is the reduction of the fragments to their place and maintaining them there, thus relieving the soft tissues of a source of constant irritation. Elevation, by bringing into use the force of gravity, and thus assisting in the unloading of over-charged vessels, is of great importance; general position also adds its share in securing the comfort of the patient.

Of all local applications, heat and cold demand the greatest consideration and confidence. It has, I think, been altogether too common to decry the use of cold in treating inflammation resulting from fractures. The same judgment is here required as to whether cold or heat is best as is required in the consideration of the treatment of any other injury. Some cases, such as those occurring in the aged or in delicate or rheumatic persons, at once suggest to us the impropriety of using cold; while in the healthy or in the plethoric, particularly if the fracture extends into the joint, ice-cold applications are of the greatest benefit, and their use cannot be too strongly urged. Of course, a time comes when the continued use of either heat or cold is not indicated; but this is a question whose decision must be made by the attendant, and for which no fixed rules can be laid nown.

The majority of topical applications owe their value here, as they do in other inflammations, to the evaporation and consequent cooling of the surface that occur when they are used, and they are therefore to be regarded as entirely secondary in efficiency to the use of cold or heat.

I here mention the relief of pain as one of the indications in the treatment of fractures, because I desire to emphasize the fact that properly adjusted fractures rarely cause much pain, and the administration of an anodyne for this purpose, except possibly during the first day, is not ordinarily necessary. Persistent and excruciating pain is always, in my own practice, an indication for prompt removal of dressings and careful revision of the splints, paddings, and bandages, or the readjustment of the fracture. A very slight change in the dressing will often give instant relief from pain, and if the importance of this fact were more generally appreciated there would be less frequent administrations of anodynes and more careful investigation of the dressings, and consequently more carefully adjusted fragments. Serious pain at the seat of fracture persisting after the second day is almost invariably due to a faulty replacement of fragments, and is in all cases an imperative indication for readjustment of splints or bandages.

The last indication, that of restoration of function, must be kept in view from the very first. Not every fracture will permit of complete restoration of function. Important structures may have been injured or joints entered that may render it obvious from the start that complete restoration can never occur; but we must always strive for the best under existing circumstances. The causes of impairment of function are various, and among the more obscure ones are to be mentioned injured nerves and compressed and obliterated vessels. The most common cause in uncomplicated cases, however, seems to be long-continued fixation of the neighboring joints, rendering them stiff and painful when the time comes for using them. Fortunately, as this is the most common cause, so it is the one most easily counteracted, and that by the use of frequent massage and early passive motion of the joints. I grant that this consumes more time than we often feel inclined to bestow, but the benefit to be derived is none the less positive. In connection with this I wish to urge the early abandonment of splints. Certain complications, such as non-union or fibrous union, may interfere with all rules; but, as a general statement, from two to three weeks for children, and from three to four weeks for adults, is a sufficient length of time for a splint to remain on. This would hardly apply, however, to fractures of the femur, in which it is not infrequently necessary to maintain the splints for six or eight weeks, or even longer, though here too the general law holds that dressings should be removed at the earliest possible moment and massage and passive motion instituted. While early passive motion in cases of fractures extending into the joint is opposed by some, and while there undoubtedly exist some theoretic objections to it, yet as the outcome of practical experience I can most heartily recommend it, and constantly make use of it in my own practice.

The discussion of the treatment of compound or other than simple fractures, or of the many compli-

cations that may occur at the time of the injury or subsequently, is not attempted in this paper. I have endeavored to confine myself solely to the general indications for the treatment of simple fractures, and as a summary, desire to call attention to the following propositions:

1. The indications for the treatment of fractures are positive and fixed.

2. All fractures should be adjusted at the earliest possible moment consistent with the obtaining of proper appliances or assistance.

3. We should not wait for inflammation to subside before placing the fracture in some kind of a retention-apparatus or splint.

4. Chloroform should be administered more frequently to facilitate diagnosis and adjustment.

5. When properly reduced there is comparatively slight tendency to redisplacement.

6. Simple splints are to be preferred to moulded ones.

7. Use that splint that best fulfils the indication, regardless of preconceived ideas.

8. Non-permanent are ordinarily to be preferred to permanent dressings.

9. Dressings should be opened up and fractures examined not later than the second day.

10. Rest and elevation are the best means of combating inflammation.

11. Cold is not contra-indicated in robust patients, particularly if the fracture extends into a joint.

12. Pain is best relieved by revision of the dressings.

13. Early passive motion and frequent massage are the best means of restoring function.

THE TREATMENT OF EPILEPSY.

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THE term auto-intoxication has become very familiar to physicians within recent years. Bouchard's work upon the subject has circulated widely, and has indeed done much toward the modification of our views of certain disease-processes. After many years of patient research morbid anatomists have been compelled to admit that it is possible for a man to suffer for years from a disease which may manifest an almost constant symptomatology, which may cause an immense amount of suffering, which may even incapacitate him entirely from his daily vocation, and yet which may leave absolutely no trace of disorganization of tissue to be detected by our present methods in pathologic investigation. There are several common disorders which are so characterized, and which have, in confession of ignorance, been classed as "functional." It would appear now that it is in this class of diseases the theories of auto-intoxication find especial adaptation, and probably no disease indicates more strongly the likelihood of a species of self-poisoning than that peculiar manifestation of disordered nervous action known as epilepsy. As yet, unfortunately, we have no definite proof that can be brought forward in support of the theory; but the theory is really so plausible, and it seems to offer such reasonable explanation for otherwise inexplicable conditions, that we bid it welcome.

The term auto-intoxication is not, perhaps, a good one. It scarcely expresses all that it is intended to imply—that the poisoning may not be due alone to defective elimination of toxic products of man's own metabolism, but that it may also depend upon the excessive absorption, particularly from the digestive tract, of the products of the bacteria, etc., which, under any conditions, are present there. "Insufficient elimination" possibly covers the ground better, but is less wieldy than the generally used term.

We look upon convulsions, no matter what their nature, as the result of a sudden and violent discharge of nervous energy from the cells of one or other portion of the central nervous system. As to the cause of this discharge, we have no definite knowledge. It is very probable indeed that there is a lack of inhibitory power in the motor cells, but there must be a pathologic state underlying this lack. The microscope has given no positive information on this point. Bevan Lewis, it is true, has claimed that by adopting a certain technique, a fairly well-defined and nearly constant vacuolation of the nuclei of the second layer of cortical cells can be made out, in the post-mortem examination of an epileptic's brain. But other observers have detected similar changes in the brain of animals after excessive fatiguing exercise. It seems reasonable, therefore, to assume that the condition that Lewis describes is consequent upon rather than causative of the epileptic discharge. I think it is much more than likely that if convulsive seizures are due to any morbid anatomic condition, the very perfect apparatus with which we are now provided for the study of the tissues would long ere this have permitted us to demonstrate such a condition so conclusively that there could be no room for dispute. We are, therefore, simply driven to the conclusion that the pathologic state underlying these seizures cannot be histologic, and that we must look in some other direction for the discovery of the cause of these very distressing "nervous storms."

It is quite natural, in this day, for us to turn our attention to the chemic side of the problem of life. The recent advances in the chemistry of both phy-

siologic and pathologic processes have not been less wonderful than they have been practical, and we are led to expect much from the workers in this field. But we need scarcely take into account the most recent work in order to form a very good hypothesis as to what constitutes the condition underlying the convulsive habit. Even with little knowledge, we can readily conceive that the lack of inhibitory power which (in "idiopathic" epilepsy) we believe to exist in the motor cells may be the result of mal-nourishment consequent upon the insufficient removal of some waste product (*i. e.*, toxic material) which, as a mild but constantly acting irritant, tends to make unstable the cerebral cells. I confidently believe that it is toward the discovery of such toxic material we must direct our attention if we are to find the cause of the trouble.

Perhaps the case is stated rather bluntly when the instability is attributed merely to a defect in elimination. There may be an excessive production of the toxic material. This question, however, does not affect the treatment which the assumption suggests. If it is granted that toxic matter is allowed to accumulate, we can readily understand that a certain point will in time be reached when the nervous centers can no longer stand the pressure, and when a convulsion will be determined. Or it is quite conceivable that the cells, rendered unduly irritable by the continued presence of the effete material in quantity which is insufficient in itself to cause discharge, may react violently to some slight external stimulus (as a loud noise or sudden flash of light) which ordinarily would have no such effect. In either case, the discharge is followed by a temporary restoration of cell-stability. This, I believe, is due to the fact (ascertained definitely by Horsley) that the brain is hyperemic during a convulsion—a condition which certainly must aid in the elimination of the toxic material. The increase in the urinary secretion, so frequently noticed after a fit, would also appear to indicate an extra elimination of effete tissue-products.

The theory merely supposes a close analogy between the convulsions of epilepsy, of uremia, of asphyxia, etc. No matter what muscles are implicated in a convulsion, and no matter what we have supposed the underlying cause of the convulsion to be, we have been accustomed to regard all convulsive seizures as due to abnormal functioning of cells in some part of the central nervous system. The cause of this abnormal functioning is not yet apparent, but there is much reason to suppose that it is due to some process of auto-intoxication.

Physiologic experiment has shown that certain substances found in urine, as kreatin, kreatinin, etc., when sprinkled over the motor cortex of experimental animals, will induce convulsions that are followed by coma. Normally, from nervous tissues certain chemic substances may be isolated which bear close resemblance in composition to kreatin; in fact, this agent itself has been separated, as also have xanthin, hypoxanthin, etc. It is interesting in this connection to note a case not long since reported in THE MEDICAL NEWS, by Dr. B. K. Rachford, of Cincinnati, in which there were peculiar epileptoid attacks, and in which it was found that hypoxanthin appeared in marked excess in the urine.

In a *Note on Convulsive Seizures*, which I recently published, there occurs the following:

"Our knowledge enables us to classify convulsions into those that *are* and those that *are not* due to some evident irritant. Those fits following trauma of the brain, those associated with tumor, abscess, or other condition in which structure is disturbed (as in apoplexy, meningitis, general paralysis of the insane, etc.), class under those due to an evident irritant. The so-called idiopathic epileptic fits, major and minor, the convulsions of hysteria, etc., might be placed in the list of those in which there is no evident irritant. And in some conditions that have long been regarded as due to the retention of effete matters in the system—as in what has been called uremia, as well as in the early stages of many acute disorders regarded by modern pathologists as toxic (bacterial), we find convulsions to be a frequent and prominent symptom. It is true that these convulsions differ materially from one another in their appearances, but the differences are really minor, and depend upon the situation of the cells in which the discharge of nervous energy originates. I think it is reasonable to suppose that in every case the cells are excited into discharging—or at least made extraordinarily unstable—on account of irritation, whether that irritation be evident as a tumor or gross lesion of some kind, or whether it be the more subtle but equally capable effect of some retained poisonous secretion."

In the therapy of epilepsy our theory at once suggests the adoption of eliminatives and the administration of drugs that tend to prevent, or at least to limit, putrefactive change in the intestine, so that from this source, at any rate, there may be no reabsorption of poisonous refuse. An occasional diuretic, a frequent purge, and once in a while a diaphoretic, aid in increasing the amount of matter eliminated. Blood-letting may be adopted in suitable cases for this end. The use of intestinal antiseptics is unquestionably desirable. I have tried β-naphthol and salol faithfully and with benefit, but have abandoned both for cinnamon-water, which can be given freely, and which has a really powerful effect in checking decomposition in the intestinal tract. Chloroform-water is theoretically good, but I have not yet had sufficient experience with it to recommend its administration for this purpose.

Of course, the salts of bromin yet remain our sheet-anchor in epilepsy, and I confidently believe in their curative properties. Bromids are rarely given a proper trial in this disease. If the cause of the disorder can be definitely removed—and this is surely the first indication in any treatment—there may still remain the *habit;* but this can be overcome by the judicious use of one or other salt of bromin. Of course, the more firmly fixed the habit has become the more difficult will it be to effect a cure, but I have seen perfect recovery follow careful treatment by bromid in cases in which the disorder had not been of very long standing. As to dosage and choice of salt, I can add nothing to what has already been written, except that which is shown in the following table, the sodium-salt being given in each instance in doses 25 per cent. larger than the potassium-salt.

My experience with epilepsy has been limited almost entirely to the practice of the Nova Scotia Hospital for the Insane. Here we have a number of epileptic patients, and in their treatment almost every drug ever recommended has been tried. Nothing, however, has produced such good results as one or other of the bromids, which we generally prescribe in doses of from 25 to 40 grains twice daily. In some cases, particularly those in which nocturnal fits are common, we combine chloral hydrate in doses of from 10 to 12 grains, and in others we use digitalis in addition to bromids.

For some time I have been carefully studying the effect of different treatments, and I submit in tabular form the results in eight patients who have been continually under observation for nearly three years:

TABLE SHOWING AVERAGE NUMBER OF FITS PER PATIENT PER MONTH ON DIFFERENT METHODS OF TREATMENT.

Patient.	Ordinary treatment by bromids, 9 months.	Varying treatment, 8 months.	Potassium bromid combined with intestinal antiseptics, etc. 12 months.[1]	Sodium bromid combined with intestinal antiseptics, etc. 4 months.
No. 1 . . .	33.0	36.0	29.6	23.8
" 2 . . .	9.8	12.5	7.85	7.0
" 3 . . .	1.4	1.5	0.41	
" 4 . . .	17.0	8.4	2.1	0.5
" 5 . . .	14.0	12.6	8.33	4.5
" 6 . . .	5.7	8.9	5.1	3.0
" 7 . . .	10.2	7.25	8.42	5.75
" 8 . . .	5.1	4.12	2.0	1.5

The varying treatment adopted during eight months of 1893, the results of which are indicated in the second column of the table, included the use of β-naphthol alone or in combination with potassium bromid, sulfonal and salol, potassium bromid and salol, potassium bromid alone, etc. The details of this treatment are not very instructive, and as they are tedious I will not give them.

It will be noticed that in almost every case there has been a steady decline in the number of convulsions. The results indicated in the last column are, perhaps, to be attributed more to careful attention to the eliminative part of the treatment than to any superior merit of the sodium over the potassium salt.

Patient No. 1 is an Indian, the only one of his race that I have known to be epileptic. As will be seen, his fits are very frequent, and strangely enough we have found them to be particularly frequent in May of each of the five years that he has been here. In that month of last year he had 120 convulsions. He has on several occasions had as many as twenty fits within twenty-four hours, but he never develops a true status epilepticus. Patient No. 3 had just completed twelve months of treatment with potassium bromid and cinnamon-water, and was seemingly in his usual health, when he had a convulsion, which was not noticed to be different from an ordinary epileptic seizure. As, however, he did not rally so quickly as usual, I was summoned and found him comatose. A catheter was passed, and the small quantity of urine obtained was found to be rich in albumin. In spite of treatment the coma persisted, and death followed eighteen hours after the convulsion. The incident is instructive, both from the closeness with which his last convulsion (which must have been "uremic") resembled the usual epileptic seizure, and also as showing that post-epileptic albuminuria must not always be regarded lightly.

I have tabulated these eight cases because they were on a routine treatment. Several other cases have been under my observation in which varying forms of treatment were adopted, as they appeared to be indicated, and some cases could not be treated medicinally on account of their mental condition. These last-mentioned cases have remained *in statu quo*, so far as the epilepsy is concerned, while the others have progressed favorably in direct ratio to the thoroughness with which the treatment could be carried out.

I might just state in brief summary that an average of 12.3 fits per patient per month under potassium bromid alone, or in ordinary mixture, has been reduced to just about half that number during the eighteen months that we have been combining intestinal antiseptics, etc., with the ordinary drugs. This result I regard as a very strong argument in favor of the theory of auto-intoxication in this disease.

[1] During this period treatment was suspended on one occasion for twenty days. The result was a large increase in the number of fits, which made the averages in this column higher than they would otherwise have been.

In presenting this short paper to the profession I have to claim the indulgence which a preliminary communication always merits. I trust in the near future to be able to bring forward experimental evidences of the correctness of the theory which has influenced the treatment of the disease so materially in the hospital with which I am connected.

DISEASED CONDITIONS OF THE OVUM LEADING TO WATERY DISCHARGES FROM THE UTERUS.[1]

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IT has been the experience of almost every obstetrician to be called to the bedside of his patient to find a history of watery discharges from the uterus, pregnant or otherwise. It may have been with a feeling of uncertainty that he has attempted to assure his patient of the prognosis, and it may have been his experience to discover after a while that he has made a mistake fraught with danger to a trusting patron, or it may be that his over-confidence that it was but a simple affair may endanger the confidence of patient and friends by giving a false security leading to a disastrous outcome. With a feeling that we sometimes make the mistake of improperly weighing these seemingly small matters, and with a hope of provoking a profitable discussion, I have ventured to make a study of this subject.

It would seem that the best understanding might be attained by an inquiry into the pathologic conditions of the different tissues that may lead to such discharges, and among these chronic diffuse endometritis first claims our attention. Schroeder considers this to consist in a chronic diffuse proliferation of the decidua vera and reflexa, and in this he has been followed by the best students who have given the subject careful examination. Under the stimulus of increased blood-supply during pregnancy this granulation-tissue takes on additional and unnatural growth, and the thickened, indurated decidua developing upon this rank soil, so to speak, is liable to undergo cystic degeneration. The mucous coat becoming still more thickened, many of the changed cells are choked off, and in the deeper layer the cavities are increased in number and size until the cysts occupy most of the substance.

Of polypoid endometritis, which by some is considered but an advanced degree of the previous condition, and by others is held to be the result of pathologic conditions, such as syphilis and the changes following the acute infectious diseases, we have a considerable number of cases recorded, characterized by great thickness of the mucous membrane, which is studded by prominences of varying size and varying degrees of elevation, from smooth wounds scarcely raised above the surface to those that are pedunculated and sessile. This complication of pregnancy leads usually to early abortion, following a history of frequent aqueous and bloody discharges, and may account for that peculiar tendency to throw off the results of conception in the earlier months so often observed in syphilitics and those attacked by the infectious diseases.

In regard to catarrhal endometritis, the German authors Schroeder, Spiegelberg, and Braun, hold the opinion that chronic inflammation of the decidua may, aside from the cellular proliferation mentioned, produce an abnormal liquid secretion. But Stopfer, whose opinion is much respected, holds to two sources of this collection, the traumatic and the catarrhal. Collecting at various points, and between the different layers of the membranes and between the membranes and the uterine walls, and with contents varying in consistency from that found in cystic degeneration and in the hydatids, they give rise to discharges varying in amount and simulating the breaking of the waters at full term. The source has been held to be by transudation from the amniotic cavity by secretion from the uterine walls and by transudation from contiguous bloodvessels.

Among the diseases to which the placental structure is subject that may lead to these conditions must be mentioned placentitis. This inflammation, leading to a weakened condition of all the tissues, including stroma, bloodvessels, and the villi, may lead to extravasations called placental apoplexies. In these irregular cavities filled with blood the solid elements degenerate or are absorbed, leaving the cavities filled with serum-products in the form of a slightly colored and often viscid liquid. The fetus not surviving the changed conditions, there result the so-called carnified moles, which sojourning *in utero*, and the contents undergoing pigmentary and other changes, we have a cystic mole remaining, with cavities filled with a sero-sanguinolent fluid from the blood-serum.

In the last division, that of the so-called hydatid mole, we have the most interesting cause of these discharges. This condition is most likely to occur during the last half of the childbearing period, and that uterine disease was the determining factor has been the prevailing opinion. Later investigations, however, have tended to disprove this by showing that by far the greater number of cases present no such diseased conditions.

The most important and interesting vital property in these cases is that the vesicles consist of living, growing tissue-elements. Fatty degeneration

[1] Read before the fourth session of the Western Association of Obstetricians and Gynecologists, December 27, 29, 1894, Omaha, Neb.

of the epithelial covering and connective-tissue stroma takes place only to a minor degree, thus supporting the theory of their origin from other than dead masses of tissue in which these changes would be marked. On the contrary, an unusual proliferating tendency is found, while they receive their nourishment directly from the uterine wall. And while chorionic villi and all attachments are nourished from vessels of the allantois, this mode of blood-supply cannot exist in vesicular moles, because in cases of total destruction of the chorion there is no fetal circulation, and even in *mola partialis* the vessels to the degenerated part are obliterated *in toto*.

The diagnosis and treatment become of interest when we consider the inroads upon the vitality of the uterine wall, the liability to form adhesions, difficulty of separation, and danger of alarming and uncontrollable hemorrhages. In all the varieties in which the liquid is contained in the cavities between different layers of membranes and between the membranes and the maternal structures proper there is little in the way of symptoms except that the woman during the last of a seemingly normal pregnancy is surprised by a jet of liquid usually of considerable amount, followed by constant oozing, leading her to fear the oncome of labor; yet in the absence of the usual pains these fears are usually set at rest, and the recurring attacks of the same character may settle the diagnosis. The presence of catarrhal metritis at the time of conception may be of value as a determining factor. The prognosis is good, neither health nor pregnancy being compromised; and the treatment should be expectant and watchful of uterine contractions.

Of all other varieties the diagnosis is difficult, the symptoms depending upon obscure conditions. In many cases there may be such a grouping of symptoms as may lead to an intelligent and safe position. Rapid and exaggerated development of the abdomen not in accord with the period of pregnancy is of value, but alone may give a suspicion of malignant growth or ovarian cyst. Small and frequent discharges of a peculiar type have weight, especially when there is alternation of bloody and aqueous flows, commencing about the second month. To the careless this may lead to a diagnosis of carcinoma of the cervix or vicious placental insertion. When we have a combination of these during the first months, when the development is easily appreciated, and a faulty insertion is not liable to give trouble, we may easily direct our mind to those morbid conditions of the developing membranes that are likely to occur. Couple with these a history of tender uterine walls and a history of painful contractions of the irritable surface, and we have a grouping of symptoms of great diagnostic value. All conditions the result of extravasations and of degenerations that are extensive, leading to cysts and carnified moles, cause cessation of growth of the fetus, and there being no proliferation-tissue we have no increase in size, while parturition is delayed, and yet menstruation is interfered with until, no longer tolerant of its contents, the uterus rids itself of the mass. On the contrary, in those cases in which there is an excess of proliferating tissue we have great increase in size and painful contractions from over-distention, producing discharges of water, and sometimes of the vesicles themselves. Combinations of degenerated tissues as complicating pregnancy make the diagnosis more difficult, and require more discretion, lest we fail to be clear, and hazard the life of the fetus which might go to full term.

Upon a careful and proper diagnosis depends the proper application of treatment. In those cases of simple hydrorrhea, and when extra sacs of water exist as incidents in a pregnancy otherwise normal, no concern need attach, save to make certain the diagnosis and to assure those interested that at the proper time all will be well. Once determined that pregnancy continues in the presence of cystic degeneration of the membranes, and our position must be tentative, with a constant watchful care for impending danger. Under these changed conditions the fetus, having its wellspring of nourishment encroached upon, may shrink and be absorbed, or, escaping this, may go to term the worse for its limitations. At all times this development on an over-sensitive uterine surface is a menace to the integrity of the tissues. Responding to the rapidly increasing contents, the irritation is liable to set up contractions, resulting in complete expulsion, fraught with danger from an adherent mass planted upon an over-weak uterine wall, where the close and unnatural connection with the maternal circulation may, and often does, result in severe and dangerous hemorrhage. When fetal vitality ceases, nothing is gained by waiting, and the uterus should be emptied. In all cases uncomplicated by pregnancy, be the morbid condition the result of placentitis, of extravasation, or of proliferating cystic degeneration, when our diagnosis is certain our position must be that of active interference. To allow the condition to continue is to risk accidents that are hazardous to life, and delay may only add the weakness of tissue and loss of vitality accompanying the anemic condition that invite trouble through septic infection. Thorough tamponning of the vagina, repeated every twenty-four hours until dilatation takes place, or hemorrhage occurs, with a careful separation with the finger, and removal, are the measures indicated, and nowhere is the thorough and painstaking application of antisepsis more indicated than in these

cases. Careful search for adherent masses and subsequent tamponning of the uterus when vessels fail to contract are always indicated, while the more close and unnatural connection with maternal structures will indicate more care in the use of the intra-uterine douche.

ECZEMA OF THE SCALP.

BY J. ABBOTT CANTRELL, M.D.,

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OCCURRING upon the scalp, eczema is usually found to be of the erythematous, the vesicular, or the pustular variety, and the treatment will depend somewhat upon the condition present, whether it is of long standing or of only a few days' duration, the age of the patient, as well as his natural and daily habits.

The erythematous variety is very likely to be of long standing; it is more usually found in those of middle or advanced life, and is usually connected with the same condition as it occurs upon the face—in fact, spreading from the face. When this variety does attack the scalp, and when not in connection with the disease as existing upon the face, it is usually seen in patches, which may be single (the general rule) or multiple. These are found to be very irregular in outline; the disease may even attack the whole scalp, and no part escape. When this takes place the condition is usually very disagreeable, as well to the patient's friends as to himself. It attacks all of the hairy part of the scalp; there may be a dry condition, or it may consist entirely of the moist variety of the disease. If it is the latter, this, with the scratching and tearing of the patient for relief, gives rise to a very distressing condition. The presence of blood due to the scratching and the natural discharge of the disease bring about a matted and crusted condition of the hair that causes the patient much discomfort.

The vesicular variety usually occurs at or near the temporal region, immediately above the ear and in the occipital space. The lesions, if seen early, are found to be discrete and distinct; but if allowed to proceed for some time before coming under the physician's observation, they will be found coalesced and covered with a conglomerate crust. There may be a few discrete vesicles around the borders of the patch; the part will be itchy and feel disagreeable, and the patient will scratch or tear at the part and cause the flow of blood as well as serum; the hair becomes matted, the parts inflamed and somewhat edematous. From this we are likely to find the part bulged out to some extent from the normal position of the head. When this variety occurs in the occipital region it is usually found in connection with or caused by pediculi, for, owing to the great amount of hair that is usually found in this locality, the part is warm and consequently sought by these parasites, so that in a short time there will be found a very bad condition, with a foul-smelling odor. This variety is likely to be found in the very young or the very aged.

The pustular type is usually a disease of childhood, rarely, as a rule, being witnessed in those of more mature years. These lesions are seen scattered throughout the scalp, and thus differ very much from those of the vesicular variety, which is more likely to form patches. Pustular lesions do not coalesce, but are found to be distinct and discrete, each being remote from its nearest neighbor. There may be only a few (the usual rule), being seen in great numbers in only a few cases, although new ones are continually forming. They are mostly found at the openings of the hair-follicles, where the discharge mixes with that from the gland. Occurring in those of very tender years they rupture early, soon becoming crusted, so that from the color of the pus and its combining with the secretion of the sebaceous glands, there results a greenish yellow crust, which, if not removed early, will collect in one large mass, matting the hair, and, in fact, binding it down so closely to the scalp that it can hardly be lifted up at all. In fact, one would almost think it would break rather than bend.

Naturally the inflammation will be increased by leaving these crusts in this position, and they thus cause great pain and suffering. This variety is likely to undergo spontaneous involution—that is, it may disappear without treatment or cause—an unusual termination, however, of the disease.

The usual condition is that in which we are confronted with enlargement of the glands in both the vesicular and pustular types. The glands may increase in size and become almost as large as an ordinary furuncle, but in only rare instances do these glands break down. Those usually affected are the post-cervical and the occipital, and in very aggravated cases those of the preauricular region may also be involved. Sometimes both the vesicular and pustular varieties become so aggravated that they resemble the ordinary plica polonica.

The treatment of these conditions must consist in both internal and external medication. Occurring in either a child or an adult, the natural secretions of the body must necessarily receive proper attention; the intestinal canal must be kept clear of all accumulations; the kidneys must act in a normal manner; the patient must have the normal amount of sleep; he should wear proper clothing during the waking and the sleeping hours, both in winter

and in summer; he should eat carefully selected food, and in normal quantity. If a child, it naturally must be given a milk-diet at all times, and there must be no change from this rule. Care should be taken that he is not given potatoes, an article which mothers usually think a child can eat and digest. If an adult, he should refrain from certain foods, especially those that cause intestinal derangements, such as fried food, pastries, stewed fruits, and pork, no matter of what kind or cooking. He should be allowed as much bland food as he may want, so that he does not overload his stomach, and this will consist of all green fruits, roasted or stewed meats, a few potatoes, either white or sweet, tomatoes and all those articles of diet that have a tendency to operate upon the intestinal movements or increase the flow of urine, such as cabbage when uncooked, spinach and kale. While this list is not a full one of what the patient may or may not have, it gives a general idea of what is necessary for his comfort, and the nearer we keep to these lines the better the result will be.

If the patient should be one whom it would be advisable to give a laxative or a diuretic at any time, one of the following methods may be carried out. I am usually in the habit of giving a tonic aperient, and one on which I mostly rely is as follows:

℞.—Magnessii sulphatis	. .	℥j.
Ferri sulphatis	. . .	℥ss.
Acidi sulphurici dil.	. .	f℥j.
Sodii chloridi	. . .	gr. x.
Infusi quassiæ	q.s. ad.	f℥iv.—M.

My usual plan is to begin with one tablespoonful of this mixture every morning about one-half hour before breakfast, in a goblet of water, which, preferably, should be warm. Should this prove insufficient to move the bowels properly I usually repeat the dose immediately before the evening meal. If the kidneys are not secreting freely, I have one-half dram of potassium acetate added to the morning dose. When this does not give the proper amount of urinary secretion I give the potassium salt every three hours, in doses of from ten to thirty grains. Should there be any complication, this also receives the necessary attention. Carlsbad, Friedrichshall, and Hunyadi water may be better borne than the formulæ given, or cascara sagrada will take the place of any or all.

The general condition may demand a tonic; if so, no better advice can be secured than that suggested by the disease itself. This must be decided upon in each case, as no general rule can be adopted to govern this portion of the treatment.

In infants the first step in the treatment will be the use of something to remove the accumulated crust, which may be accomplished by either sweet-oil or a starch poultice, preferably the former, if it suffices. This should be used first, owing to the early rupturing of the pustules and the discharge of their contents, as the crusts and admixture with the sebaceous secretion obscure the state of the inflammation. After the removal of the detritus, then and then only can we fully appreciate the actual condition. Such remedies as resorcin, or calomel, or acetanilid will undoubtedly give the most prompt relief, and the best manner of applying them will be as follows: They may be given in ointment-form with petrolatum, or the ointment of zinc oxid in the proportion of twenty grains to the ounce, applied twice or thrice daily, the part being covered with some dressing that prevents the little patient from irritating the part by scratching and tearing.

Should there be pediculi in connection with the disease I usually advise the use of the fluid extract of staphisagria in the proportion of ʒij to ℥vj of dilute acetic acid, and then the application of the ointments named. I never, as a rule, advise the cutting of the hair.

When occurring in the adult it may be the best advice to use first a dressing of the lotio nigra of the Pharmacopeia, or a wash of a saturated solution of boric acid in water; this should be applied for at least one-half hour at each dressing, to remove the accumulations of the part and to some degree to make an alteration in the degree of inflammation, following this with the use of some drug that has astringent properties, such as one of those mentioned when referring to the scalp of a child. We may use one of a more stimulating character in those cases that show some chronicity, such as salol, salicylic acid, or even phenol. I prefer at times to employ a very strong ointment in the more chronic cases, using from ten to forty grains of salol or salicylic acid, and adding ten grains of phenol to the ounce, thus getting rid of the disease and giving the patient relief from the itching that is always present.

315 SOUTH EIGHTEENTH STREET.

CLINICAL LECTURE.

AN INTERESTING CASE OF LEPROSY.

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C. B., male, aged twenty-two years, colored, a native of one of the West India islands, recently applied to the Skin Department of the Medico-Chirurgical Hospital. His history was as follows:

Seven years ago he noticed, for the first time, a gradual change of color in the skin situated over and below the right knee-cap. It was not long afterward that he discovered a numbness or diminished sensibility in the affected surface. Very slowly the pathologic alterations

extended. The patch in which pigmentation was deficient grew larger and the numbness deepened into anesthesia. At length the loss of color became uniform upon the anterior surface of the limb from knee to ankle, and also for some distance above the knee. The change in appearance was more decided above than below the knee, but the area involved was not so extensive. The alteration in the color of the skin proceeded very slowly during the first three years. For the last eighteen months, however, it has gone on more rapidly; within that period the thighs have been invaded, and it has also made its appearance upon the buttocks. The last manifestations were at first in the form of roundish spots which enlarged in all directions. About two years ago the same process began upon the left leg. The spots upon this limb were anesthetic from the beginning, but the aspect was always, upon close inspection, a little different from that upon the right side. The skin of the right leg was always smooth; upon the left limb the color of the lesion has always been a little darker and the surface somewhat roughened. Nevertheless, upon either side there is a marked contrast of hue between the diseased patches and the adjacent normal integument. The patient states that upon the left limb there is a tendency to slight scaling. About four years ago the skin of the right ala nasi became erythematous and the seat of a slight tingling and smarting. A short time before this manifestation he had received a sharp accidental blow upon the nose in the region where the redness developed. Every month an exacerbation occurs, and the nose becomes swollen and more intensely red. In the intervening periods there is less turgescence, but the red spot never disappears. Three years ago a similar spot of erythema made its advent upon the left hand over the metacarpophalangeal joints. At times this flush fades so as to be scarcely distinguishable, and then again it will become more vivid. The man is of the opinion that the patch upon the hand is less perceptible on chilly days and in winter, while in summer it grows quite red. There is diminished sensibility, but not complete anesthesia, in this lesion upon the hand. It has extended into the clefts between the fingers. At the same time this surface is very sensitive to hard knocks, and the same is true of the lesions upon the limbs. The palms are free from abnormality.

The patient is of moderately dark complexion. He has been in the United States for four years, during which time he has lived in our Northern seaboard cities. He has been in Philadelphia for three months. Sometime ago the skin upon the dorsum of the right foot near the toes became pale and anesthetic, the subcutaneous tissues were subsequently diseased, and necrosis attacked the three middle toes, which, two months ago, were amputated. The soles of both feet are more or less anesthetic; upon the right side sensibility has entirely departed and upon the left it is blunted.

All the lesions itch considerably of late and cause the patient to scratch. The man states that this has led to the excoriations and the formation of small scars. He has never noticed any pallid patches, pain, or anesthesia in the mouth. He is habitually abstemious in regard to drink. A small quantity of any kind of liquor produces a brief feeling of exhilaration, which is speedily followed by a disagreeable sense of depression. He has not, however, observed any flushing of the face after moderate potations. Tobacco also has an unpleasant effect upon his nervous system, for which reason he seldom smokes. He has been subject from his earliest childhood to what he calls "blind boils," which were commonly about the size of a pea. Since the development of the anesthetic patches upon his body there has been no return of these until about two months ago, when groups appeared around the borders of the pallid areas. At the same time an eruption of small red papules occurred upon the face.

The patient is subject to frequent chills, more especially in cold and damp weather. He also complains of a throbbing sensation in the arms and upper part of the trunk. The pulsations, when present, manifest themselves at a regular rate. The man has a good appetite, but is troubled with indigestion, accompanied by flatulence. There is a tendency to constipation. He often has neuralgic pains over the right side of the face. These sometimes keep him awake at night, but at other times he sleeps well. His father is still living, aged fifty-two years. His mother lost her life by drowning twelve years ago. Neither parent suffered from any disease at all resembling his, nor is he aware of any similar case among his relatives. The patient denies ever having had any venereal affection. He has observed that under no circumstances do the anesthetic patches perspire.

The patient has seen cases of leprosy on his native island. He is very much depressed in spirits, has visited various medical institutions in the hope of relief, and has availed himself of every opportunity of reading books which he thinks bear on his case.

Upon examination there were seen upon the right leg large patches, the color of which was in marked contrast with that of the normal skin. The shade was about that to which the French give the name of *café au lait*. Above the knee the disease extends to the middle of the thigh. There is diminution or total loss of sensibility in the lesions. A needle can be thrust into the skin without causing pain. Nevertheless, hard pressure or a blow upon the diseased surface causes extreme pain, reaching, as he expresses it, "to the bone." On the inner surface of the right leg there are slight roughness and scaliness of the surface, and in this situation the skin is a little darker than in other parts affected. Upon the thigh the lesion has spread from the anterior to the internal surface and reaches within five inches of the groin. It has also crept around to the posterior surface. Upon the left limb the configuration of the patches is much the same. The buttocks, with the exception of the nates, are almost completely involved. The lesions upon the two sides are almost symmetrical. There are two distinct patches upon the back of the left thigh, one about 5 x 3 inches in size, and the other of roundish form and about the size of a fifty-cent piece. None of the affected spots or patches is notably raised above the general surface. There were no tubercles upon any part of the body. The lesions upon the hand, feet, and face have been described.

The knee-jerk is absent upon the right side. A drop of blood was taken from the finger and toe of the patient and spread on a cover-glass. Stained by Ziehl's carbol-

fuchsin solution, the typical bacillus lepræ was found in moderate quantities. The deep-red coloration, appearance, and size of the organism left no doubt as to the diagnosis of leprosy.[1]

There can be no difficulty in deciding as to the nature of the disease with which this unfortunate young man is afflicted. The extremely slow yet inevitable progress of the lesions, the marked anesthesia by which they are accompanied, the loss of the toes, and the constitutional manifestations, together with the examination of the blood, point unerringly to leprosy. There are, in fact, few conditions with which the case could, by any possibility, be confounded. As far as a mere casual glance at the affected patches is concerned, the malady which it most nearly resembles is vitiligo or leukoderma. Vitiligo may occur at any age, and is more common among negroes and other dark races than among whites. The blotches may develop upon any portion of the body, vary much in size and shape, and are exceedingly chronic as regards growth and persistence. The normal pigment is more or less completely lost, leaving whitish, pinkish, or brownish patches scattered irregularly over the surface. To a certain extent the pigment may be said to be rearranged rather than lost, for although the lesions may be pale, they are usually surrounded by a well-defined margin, in which an excess of coloring-matter is present. In all other respects the affected skin in vitiligo is free from alteration. It is level with the adjacent integument, is not the seat of infiltration, and its glandular elements are intact and functionally active. Sensibility is normal. There is neither hyperesthesia nor anesthesia. There is no itching or other subjective symptom. There is no tendency in vitiligo to the occurrence of ulceration, the subcutaneous tissues are not involved, and there are no constitutional manifestations. It must be the result of faulty innervation, and this in turn may be a sequence of some acute or chronic disorder. Vitiligo in itself, however, gives rise to no systemic disturbance. The resemblance between vitiligo and lepra is superficial and should never mislead. The lesions of the former grow in size, but do not change in form. Those in the latter may begin as macules, or patches scarcely raised above the general level, but, by increased infiltration, may become converted into tubercles, or macules and tubercles may develop independently and co-exist.

Another disease in which patches characterized by alteration in the color and texture of the skin occur is morphea. In a certain form or stage of leprosy, therefore, when the lesions, as in the present case, are all of the macular variety, some degree of similitude may be found between the two diseases. Morphea may occur at any period of life. It may develop upon any part of the body. Its lesions are, in the beginning, usually hyperemic, so that they are of a pinkish or violet hue. Of a roundish, oval, or elongated outline, neighboring patches may coalesce and assume an irregular contour. The patches of morphea are generally surrounded by a well-marked pink or lilac ring composed of a network of capillaries. In an early stage of evolution the affected surface may be slightly elevated. In rare instances there may be a decided projection. As the case progresses the lesions become depressed and plane with the surrounding surface, or may even sink below the general level. At the same time the color fades and the patch assumes a dead-yellow tint. To the eye it appears smooth and shining; to the touch it is firm and inelastic. After remaining stationary for a long and indefinite period the lesion may disappear by a process of involution, or it may undergo atrophic alteration and become adherent to the subjacent tissues. Some desquamation may occur in old cases. Morphea runs a very chronic course. In the later stages of the affection the cutaneous glands participate in the atrophy, and their secretions are, consequently, lessened or suppressed. Furthermore, sensibility may be obtunded, but absolute anesthesia never occurs. Morphea is not often productive of marked subjective symptoms; but tenderness, pain, or tingling may precede or accompany the development of the lesions.

From the foregoing *résumé* it will be seen that in some of its features morphea bears a likeness to lepra. The slight, or in exceptional cases, decided elevation, the brawny feeling indicative of infiltration, the dulled sensibility and suppressed perspiration of morphea are similar to the local manifestations of lepra. In both affections the color of the lesion varies considerably in different cases and at different stages, ranging from pink to yellowish or white. As regards the cutaneous lesions, however, the ultimate progress of the two diseases differs. In lepra tubercles develop upon the base of or side by side with macules, deep, chronic, and intractable ulcers occur, spontaneous amputations of digits may take place, and mucous membranes may be attacked. Morphea is free from the destructive tendencies, the emaciation, and profound constitutional involvement of lepra.

A disease that presents some points of resemblance to morphea, and which, therefore, under some circumstances, might be confounded with lepra, is scleroderma. Scleroderma consists in an increase of the connective tissue of the skin and subcutaneous strata. Its characteristic lesion is an induration and rigidity of the skin, which becomes hard, dense, and cold, and has been aptly likened to that of a frozen corpse. The affected surface is slightly raised and is generally pale in color, though in some cases it is dark or pigmented. The contraction of the integument may cause deformities of the joints which it covers. Another peculiarity of the disease is that it gives rise to a slow absorption of the phalangeal bones without the extrusion of fragments. This absorptive process occurs only in those cases in which the primary lesions are seated upon the fingers. When scleroderma attacks the face it occasions a curious and characteristic rigidity and immobility of the features called by the French writers "the sclerodermic mask." This appearance is pathognomonic, and differs absolutely from the singular and hideous distortion of the face caused by leprosy. The sensibility may be diminished in scleroderma, but true anesthesia does not occur. The secretory functions of the diseased skin may be unimpaired, depressed, or stimulated. In advanced stages of scleroderma the skin may become atrophied, adherent to the bone, or ulcerated. The ulceration and deformities produced by scleroderma may

[1] Professor Ernest Laplace, of the Bacteriological Laboratory of the Medico-Chirurgical College, made an examination of the blood of this case. He recognized and clearly pointed out the lepra-bacilli in the carefully prepared specimen.

suggest the thought of leprosy, but it should be remembered that in the former malady the digits do not fall in fragments as in leprosy. There is absorption *in situ*, but no spontaneous amputation.

In the case that forms the subject of this paper no ulceration has yet occurred except in connection with the loss of the toes. It is to be observed that the wounds of amputation have failed to unite, and the ends of the stumps are uncovered with integument. I have for this reason compared it only with those diseases with which macular leprosy may possibly be confounded. A well-marked form of lepra is characterized by the formation of tubercles, and sooner or later ulcerations occur. According to the form and stage of the disease, therefore, it may become necessary to compare it with other affections, such as syphilis, lupus, and some forms of sarcoma —in other words, with maladies characterized by the presence of tumors and ulcers.

The reasons that warrant me in excluding vitiligo, morphea, and scleroderma have been given at sufficient length. In reference to the present case, it suffices to add that neither the history nor the course of the affection presents any analogy to syphilis. Syphilitic macules are small, and it is inconceivable that they would remain persistently upon the body for a period of seven years without change and without the occurrence of other well-known manifestations of the disease.

It is not necessary in this paper to trace the natural history of leprosy. Formerly much more universally prevalent than at present, the disease has been known from the most remote antiquity. We are familiar with its clinical features and course, but on certain points concerning etiology, contagiousness, and heredity there is not yet a unanimous concord of opinion. It is known to be of infectious nature, but it was only in 1880 that its exciting cause, a specific bacillus, was discovered by Dr. Armauer Hansen, of Bergen, Norway.

Leprosy occurs in three definitely marked forms, the tubercular, the anesthetic, and the macular, the present case being an example of the last-named variety. The pathology of the three forms is identical, consisting in the infiltration of new material composed of small, round cells. According to the amount of infiltration, the lesions present themselves as macules or tubercles. As a matter of fact, although an individual case may begin, like the present, with macular lesions only, tubercles also sooner or later develop, and the two types coexist. In anesthetic leprosy the disorders of sensation preponderate from the first, and the gross lesions may be very long in developing, and may consist of either form, or both may occur. It is understood, therefore, that the forms are almost invariably mixed. There are macules and tubercles, while anesthesia is present both in the lesions and in other situations. In all forms ulceration takes place.

That the progress of leprosy is extremely slow is demonstrated by the history of the case under discussion. It is now seven years since the first manifestation of disease, yet except for increase in size and number there has been but little alteration in the appearance of the lesions. There is nothing definite in this affection as regards the duration of its stages. There is a period of invasion, but the symptoms by which it is marked are of an indefinite character, and its length must vary within wide limits. In countries where lepra is prevalent the symptoms of the prodromal period are sufficiently familiar to excite suspicion, but their significance may easily be lost in lands where the affection is less intimately known. In the history before us prodromal manifestations seem to have been absent, for no mention is made of them by the patient. The first manifestation of which he speaks is the alteration in the color of the skin. Prior to the occurrence of visible lesions an individual may be afflicted with general malaise, the alimentary functions may be disturbed, there may be an unnatural inclination to sleep, apparently causeless attacks of fever at irregular intervals, or rheumatoid pains. A symptom upon which the Japanese lay great stress is a deep flushing of the face after partaking of even a small quantity of any liquor containing alcohol. I cannot ascertain that the present patient has ever been subject to this peculiarity. He is ignorant of any flush or lividity occurring in himself as a result of drink. Such a flush may be regarded as a very suggestive sign when it occurs. In some instances there have been noted during the premonitory period headache, bleeding at the nose, paresthesia, pain along the tract of certain nerves, enlargement of the lobe of the ear, atrophy of the ball of the thumb, etc. Cases have been reported in which many years had elapsed since any known exposure to infection before the first signs of lepra appeared. The average duration of the period of incubation is thought to be from three to five years. It is not unusual, however, for this stage to pass without any symptoms sufficiently severe to attract special attention or inspire solicitude.

An objective sign that often precedes the evolution of distinctive leprous lesions is the occurrence of large blisters or bullæ upon the skin. The eruption resembles that of pemphigus, with which it might readily be confounded. Upon close observation this prodromal eruption will be found to differ from pemphigus in certain particulars. In lepra the bullæ are much less abundant than in pemphigus, and their course is very tardy. The older lesions disappear before fresh ones come out to take their place. Previous to the outbreak of anesthetic leprosy these bullæ are perceived. They are few in number, and are quite large, some of them attaining the size of a walnut. The fluid that they contain may be clear or it may be of a yellowish hue. They do not remain long upon the surface before they spontaneously rupture. After they have broken a cicatrix is left. This process may go on for years before the characteristic lesions of lepra appear. These cicatrices become hyperesthetic, and other portions of skin, even those which to ocular inspection seem healthy, are the seat of increased sensibility. Eventually the hyperesthesia is succeeded by anesthesia.

It is uncertain whether, in the present case, the scars that exist plentifully upon the body are the consequences of bullæ. The man himself ascribes them to scratching for the relief of troublesome itching, but this can scarcely be the case. In the anesthetic form of the disease other perversions of sensibility, notably formication, occur, but itching is scarcely ever a prominent symptom. Certain nerves, especially those of the forearm, also become swollen and excessively painful to moderate pressure. This manifestation is absent. The scars are old; they do not resemble scratch-marks, and represent consider-

able loss of tissue. If his description may be credited, the "blind boils," to which he was long subject, were pustules; but it is probable that at any rate, for some time prior to the outbreak of leprosy, they were in reality bullæ, the contents of which were of a yellowish hue, which, to ordinary observation, might be mistaken for true pus.

The patient states that in his boyhood the eruption to which he was subject was attributed to the consumption of salt food. It has often been suggested that an improper and limited diet might be regarded as, at least, a predisposing cause of the disease. In particular, the use of fish, especially salted fish, has been thought to have a powerful influence in the production of leprosy. Mr. Jonathan Hutchinson has, on different occasions, given strenuous support to this theory. He has brought forward a large mass of observations concerning the distribution of lepra and the dietary habits of the countries in which it prevails. It must be conceded that the malady is frequent on islands and in countries which border upon the sea. The subject of this paper dwelt, until his eighteenth year, upon a small island. In such localities fish naturally enter largely into the general dietary. But leprosy is by no means confined to the seaboard and to fish-eaters. There are inland districts where the disease is not uncommon and where it attacks persons who are seldom able to procure fish. It occurs also among certain natives and castes of India who, from motives of taste, or from religious scruples, never consume this article of food. On the other hand, leprosy is not exceptionally frequent among the Parsees, although those people are much addicted to the consumption of fish. It seems that the theory, if admitted, would prove too much, for there are few regions in which either fresh-water or salt-water fish are not freely eaten. It has never yet been demonstrated that fish especially act as carriers of the bacillus lepræ.

Leprous patches vary considerably in color in different persons and at different stages in the same case. In some cases they are of a pale-red tinge; in others they are of some shade of brown; they may be almost black, while, again, they may present a white and shining aspect. In the case of this patient most of the lesions are of a light brown or chocolate hue, which is several shades lighter than the unaffected skin. In some situations, however, as upon the nose and hand, an erythematous patch has developed. That these reddish spots are lesions incident to the disease, and partake of its specific character, is shown by their chronicity and the perversions of sensibility by which they are accompanied. The spot upon the nose is swollen, and the organ has a flattened appearance toward its tip, which recalls the characteristic facial expression of the disease in its more advanced stages. It is related that this lesion supervened shortly after an accidental blow received upon the nose. Whether the slight injury had any share in determining a localization of the general disorder cannot be determined. But that traumatism may have such an influence in leprosy seems a tenable conception. The exact experiments of Schüller have demonstrated that traumatism plays an important part in the etiology of local tuberculosis, and it may sometime be found to promote the occurrence of a leprous lesion.

The affected surfaces in this case have not as yet undergone great alteration. Tubercles have not developed, and the visible mucous membranes are still intact. Patches of anesthesia and deposits of leprous material are frequently observed upon mucous membranes. The eyes are sooner or later attacked in a large proportion of cases. The occurrence of necrosis of the bones of the toes proves, however, that in this case the force of the disease has not been expended alone upon the skin. In the involvement of bone we have a phenomenon that usually belongs to a later stage of the disease, when tubercles have occasioned ulceration extending from the surface downward, and leading gradually by a natural process to spontaneous amputation of one or more digits. This event is known as lepra mutilans, or mutilating leprosy, and usually involves only fingers and toes, but the entire hand or foot has in some instances been sacrificed. As in this patient's case, skilled surgery was accessible, the speedy work of the knife has anticipated the slower methods of nature. It is to be noted that, although the operative wounds were small, primary union could not be obtained. The ulcerated stumps are, or will be, presumably leprous, as they show no disposition to heal, and there is complete anesthesia in the sole of the same foot.

The patient has lost weight and strength, but notwithstanding the long duration of his malady he has not notably emaciated. His nervous system is to some degree affected, as is shown by his disposition to chills, his depressed and peculiar mental condition, and anomalous symptoms ("pulsations") of which he complains. The facial neuralgia also points to perverted nutrition of the nervous system.

No history of heredity is obtained in this case. That the disease is infectious is rendered certain by the discovery of the bacillus lepræ; that it is contagious under favorable conditions is no less undeniable. Its hereditary transmission was long a matter of firm belief. Facts seemed to point to that conclusion. Yet of late years doubt has been thrown upon this question. None could deny that leprosy frequently afflicted different members of the same family, but it has been thought that the fact might be explained in a different manner. Contagion was held responsible for its spread from one to another member of the same family. This theory has been upheld more emphatically since the discovery of the bacillary origin of leprosy. It was contended that a child could only inherit a tendency or predisposition to the malady, but was never born leprous. An identical opinion has been held and taught as regards tuberculosis. It was supposed that the placenta offered an effectual bar against the transmission of micro-organisms. The inference followed that if the bacillus could not find its way into the blood of the fetus, the child could not be born a leper. The deduction, however, does not compel assent. In the first place, it may be objected that an abundance of clinical evidence demonstrates that a number of acute infections are transmitted from mother to child *in utero*. Whatever may be the mode of transmission, the result is a patent fact. When a babe is born covered with the marks of smallpox, scarlet-fever, or measles, no ingenious argument can explain away the fact. Similarly, children come into this world bearing the signs of syphilis which they have inherited. No one doubts the hereditary character of syphilis.

The same train of reasoning has been used to discredit the hereditary character of tuberculosis. A child cannot inherit a bacillus, it was claimed. Without a bacillus tuberculosis there can be no tuberculosis, but only a tendency to acquire that disease upon improper exposure. It is more in accord with advanced thought, nevertheless, to recognize the fact that even if bacilli themselves cannot penetrate the placenta, their soluble products, which are, after all, the actual agents of infection, may readily find their way into the fetal blood. Tuberculosis has been experimentally communicated to animals from a stillborn babe taken from a mother dead of that disease. A still more trenchant argument is found in the fact that the micro-organisms of typhoid fever, relapsing fever, and anthrax have been found in the blood of the newborn babe. In a disease characterized by such long periods of invasion and evolution, it is not surprising that leprosy should not, like syphilis, manifest itself in the newborn babe or young infant. As a rule, signs of the former disease do not occur until the fourth or fifth year of life, and may not be observed until several years later. It may be open to suppose that in such cases post-natal infection has taken place. A few well-attested cases of congenital leprosy are, however, on record. A passage from my treatise on diseases of the skin[1] may be inserted in this connection: "Dr. Navarro has described two cases of congenital leprosy. A woman gave birth to an ill-developed male child whose body was covered with leprous spots. In two months leprous tubercles developed upon the face, elbows, and knees. Signs of the disease soon afterward appeared in the mother and in a daughter eight years of age, who had until then been perfectly healthy. All died of leprosy within two years. Again, a woman in the last stage of the disease was delivered of a well-formed female child, upon whom were many leprous spots and a well-developed tubercle on the upper part of the concha of the left ear." Two authentic cases outweigh the greatest mass of negative and hypothetic argument. For the foregoing reasons it is rational to believe that the disease is transmitted by inheritance, as well as acquired by contagion. Adjudication of this problem is admittedly difficult, as, on the one hand, the children of lepers may remain free from the disease during life, and, on the other hand, it may be acquired by those in whose family it had never occurred.

Alterations of sensibility are marked and peculiar, and may exist at an early period of the malady. The varieties of sensibility are not always equally affected. In some cases, as in the present, touch is preserved, while susceptibility to pain is lost. In others, there is no perception of cold, but heat is felt, or there may be a complete loss of temperature-sense.

The knee-jerk in this case is absent upon the right side. In some cases it is unaltered, while in most cases of leprosy in which any change has been noted the patellar reflexes have been exaggerated upon both sides.

In the development of a case macules generally precede tubercles, although tubercular lesions may be present from the beginning. It may be predicted that the later manifestations will eventually be produced in this case, although they have been so long delayed. In late stages of leprosy the discolored elevations upon the face, hands, and other parts of the body form a typical picture which proclaims the diagnosis. The face is swollen and broadened. The expression is in some patients extremely pathetic, while in others the alterations of the features give a fierce and sullen aspect to the face. The leprous infiltration destroys the hair-follicles and the glands of the skin; the hairs fall and the nails are shed. Finally, the system at large is infected through the blood and lymph-channels, and deposits form in all the principal internal organs. The spinal cord and nerve-trunks undergo marked degenerations, the bacilli of the disease are widely distributed, and death from exhaustion or from some complication at length closes the scene.

[1] A Practical Treatise on Diseases of the Skin. New York, 1893.

THERAPEUTIC NOTES.

"HORSE-NETTLE" IN THE TREATMENT OF EPILEPSY.

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THE common "bull-nettle" or "horse-nettle" (*Solanum Carolinense, L.*) has been recently brought forward as an antispasmodic of value in convulsive affections, such as epilepsy, chorea, puerperal eclampsia, etc., and "especially in epilepsy. Many cases that have resisted all other remedies have been either cured or greatly benefited by this," we are told. The preparations thus far put on the market by several manufacturing houses are in the form of a "succus" or fluid extract of the fresh nettle-berries. Favorable reports of the action of the drug have already appeared in several of the medical periodicals.

During the past five months this new candidate for consideration has been given a trial in the treatment of epileptic insane patients in the wards of the Alabama Insane Hospital, the particular preparation employed being the "Fluid Extract of Horse-Nettle," of Parke, Davis & Co., of Detroit.

The results in eleven cases are appended. All of the patients have been under daily observation for some time, most of them for a term of years, and the general character of each case, as well as the reaction of the patients to many other antiepileptic agents, is fully known.

CASE I.—A female, white, fourteen years old, has had attacks of *grand mal* since her seventh year, numbering from one to five per month; aside from her epilepsy she is in very good bodily health, and shows but little mental impairment. The bromids, acetanilid, antipyrin, and β-naphthol have in the past seemed to exert a temporarily favorable influence. For six weeks she received no medicines whatever, had but two convulsions and was in good condition, mental and physical, during the time; she was then given rhei et sodii comp., 5 c.c., t. i. d., for three days, then β-naphthol, 0.3 grm., t. i. d., for seven days, and she still had no convulsions; she was then ordered fld. ext. of horse-nettle, 3 c.c., t. i. d. During the next seven days she had sixteen fits, all severe, and her mental state became worse, and she lost noticeably in weight. The horse-nettle was then discontinued; during the two

succeeding days she had no convulsions; then in four days she had sixteen fits; after this in twenty-nine days she had six seizures, then ran nearly a month without an attack, having taken no medicine since the nettle was discontinued. The drug seems in this case to have exerted an injurious rather than a beneficial influence.

CASE II.—A male, white, aged forty years, has been an epileptic since he was four years old. He is of unstable nervous organization, and for six years past—since his thirty-fourth year—has been regarded as insane. Mental deterioration is now well marked and slowly advancing. The fits are usually severe and mostly diurnal; on the average there will be about one-hundred convulsions a year. Most antiepileptic treatment is without effect, but chloral and the bromids measurably control the occurrence of the spasms.

He was three months without treatment; the first two months he had nine fits, the third month twenty. He was then placed on fld. ext. of horse-nettle, 2 c.c., t. i. d. During the succeeding two weeks he had four fits only; the dose was increased to 4 c.c., t. i. d., and during the next two weeks he had nine fits; the medicine was then stopped; during the next thirty days he had twenty-five convulsions. It will be noted that while the number of convulsions occurring during the period of administration of the nettle is less than the number during the preceding and succeeding period of equal length, the number of fits is not less than it was during a portion of the time when the patient was receiving no medicinal treatment.

CASE III.—A male, white, aged twenty-two years, has had convulsions since infancy, and is of a low order of intelligence. Attacks of *grand mal* occur at the rate of from five to eight per month.

For thirty days when he was without treatment he had seven convulsions. ℞. Fld. ext. of horse-nettle, 2 c.c., t. i. d.; after fifteen days the dose was increased to 4 c.c., and after two weeks the medicine was discontinued. During the thirty days the nettle was given, five fits occurred; during the thirty days following its discontinuance he had eighteen fits; after this the number sank to the usual, from five to eight per month.

CASE IV.—The patient was a female, white, thirty-nine years old, constituting a long-standing case of chronic epilepsy, with much impairment of intelligence and occasional periods of maniacal excitement. The attacks occur in groups of from five to ten at irregular intervals, are severe, and occur both by day and by night. In the course of a year she will have from fifty to sixty seizures.

She was thirty days without medicines and without a convulsion. ℞. Fld. ext. of horse-nettle, 2.5 c.c., t. i. d., continued twenty-four days, followed by no convulsions. So soon as the drug was withdrawn the fits commenced, and in fourteen days the patient had twenty-two severe seizures, grew very confused and imbecile; she gradually regained her former status, and for six weeks had no attack. Chloral has given good results in this case.

CASE V.—The patient was a white female, forty-eight years old, who had had epileptic seizures, *grand mal*, since her fifteenth year, with general mental enfeeblement. Convulsions rarely occur at night. She has from three to six fits per month. The number has been for a time materially diminished by acetanilid, borax, and the bromids.

She was twenty days under no treatment and free from convulsions: she was then given fld. ext. of horse-nettle, 3 c.c., t. i. d., for thirty days, having six spasms during this time; the drug was discontinued; in the following thirty days four spells occured. The nettle seemed entirely without effect of any kind.

CASE VI.—The patient was a white woman, thirty-eight years of age, who has had nocturnal attacks of *grand mal* since infancy; she is weak-minded, hysteric, and generally unstable. She will pass from one to three months without an attack; then for a month or more will have from one to fifteen seizures every night. No drugs—bromids, chloral, coal-tar derivatives, β-naphthol, borax, etc.—have been found of any value in this case.

In eighteen successive nights she had altogether eighty-seven fits; fld. ext. of horse-nettle was then given, first, 2.5 c.c., then 3.5 c.c. four times a day and continued two weeks; during this time she had eighty-two convulsions. After the drug was withdrawn the number of convulsions gradually diminished; they ceased entirely after five weeks, and then, as usual, she went on nearly two months without an attack.

CASE VII.—A woman, white, twenty-seven years old, has had attacks of both *grand* and *petit mal* since infancy. There is much mental impairment. During three months she had forty-two convulsions, most of them of brief duration, and some with only transient loss of consciousness. She was given fld. ext. of horse-nettle, 2.5 c.c., t. i. d., for twenty days, having during this time fourteen seizures; during the thirty days succeeding the withdrawal of the drug eight fits occurred. The nettle exerted no apparent influence. This case has been favorably affected by antipyrin and β-naphthol.

CASE VIII.—The patient was a female, white, aged twenty-six years, an epileptic imbecile. She has had during twelve months about one-hundred seizures.

In three months, during which she took no medicines, she had twenty-two fits. She was given fld. ext. of horse-nettle, 3.5 c.c., t. i. d. In the twenty-eight days the nettle was continued she had eighteen convulsions; the drug was then discontinued, and during the next thirty days she had sixteen spasms, and during the next thirty days nine only. If the nettle exerted any influence at all, it increased the number of the attacks. The bromids in this case have almost always reduced the number of convulsions.

CASE IX.—A man, white, thirty years old, had his first epileptic convulsion about eight years ago; since then attacks have occurred frequently, and are severe, *grand mal*, always; from fifteen to twenty per month is about their average number. His mental faculties have undergone rapid deterioration, and he is now very dull, sluggish, and feeble-minded. A great many different antispasmodics have been tried in this case without visible benefit.

For six weeks he took no medicines of any kind and had twenty-two fits during this time; he was then given fld. ext. of horse-nettle, 2 c.c., t. i. d., increased after two weeks to 4 c.c., t. i. d., which two weeks later was discontinued; during the first two weeks of treatment he had twelve seizures; during the next two weeks, taking twice the quantity of the drug, he had eleven attacks. After the medicine was discontinued the fits occurred at

about their usual rate of from fifteen to twenty per month.

CASE X.—A white imbecile female, thirty-six years old, has averaged from three to five fits per month since infancy. The convulsions have been temporarily reduced in number by borax, coal-tar derivatives, and the bromids.

She was two months without medicine and had five spells only, none occurring during the last twenty-six days of the time. She was then given fld. ext. of horse-nettle, 3 c.c., t. i. d., and in the fourteen days the drug was continued she had six convulsions—a greater number than during any period of equal length within more than three years. In the six weeks following the withdrawal of the nettle she had five attacks.

CASE XI.—A female, white, aged forty-six years, an epileptic since infancy, is very weak-minded and dull. For some years past she has had from one to two convulsions in each thirty days, this period of time rarely passing without a seizure, except when antiepileptic drugs, bromids, acetanilid, β-naphthol, were given, when on one occasion nearly five months elapsed without a seizure.

For six weeks she was without treatment and had one convulsion; for fourteen days she took fld. ext. of horse-nettle, 2.5 c.c., t. i. d., with two convulsions; during the two months succeeding cessation of treatment she had three convulsions.

The results, it will be seen, are not encouraging. In cases V, VI, VII, and XI no visible effect was produced; in cases I, VIII, IX, and X there was an apparent *increase* in the number of convulsions during the time of treatment, and in three cases, II, III, and IV, while little or no effect was observed during the time of administration, there was a marked increase in the number of fits during several weeks following the stoppage of the medicine. The drug seemed well borne in every instance, and no complications or unfavorable symptoms (save the increase in the convulsions in the cases enumerated) were noted in any case. No one of the patients was in mental condition or in general bodily state benefited in the least. Of course, the class of patients under treatment exhibit epilepsy in its most unfavorable form; probably no case of chronic epilepsy with insanity can be cured or permanently benefited by any treatment with any drugs yet known; nevertheless many of these cases—most of them—are temporarily benefited—*i. e.*, the fits are reduced in number by not a few of the better known antiepileptic remedies. The usual rule is that the administration of any new remedy, often any change in treatment, is for a short time attended by a reduction in the number of convulsions; many drugs have in this way given us at first very gratifying results, only to prove, after longer experience, disappointing. Scarcely any line of treatment heretofore employed, however, has given such uniformly unfavorable results as has the use of the horse-nettle. It is possible that in the treatment of a less unfavorable class of patients the results might prove more encouraging.

The nettle belongs to the belladonna family, and probably possesses some of the virtues of its better known relative. Belladonna itself, however, has in the treatment of cases of epilepsy among the insane given results scarcely more favorable than those here reported.

A NOTE ON THE TREATMENT OF TONSILLITIS.

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IN the management of any given case of tonsillitis of acute form it is important to make a diagnosis between several varieties which call for different methods of treatment. It is customary to distinguish the superficial, catarrhal inflammation of these glandular organs, in which the follicles are principally involved, from the parenchymatous, or peri-follicular, inflammation, which is always attended with more profound systemic disorder, and which very commonly terminates in suppuration. Another form has been described in which the tissues around the tonsil especially are the seat of inflammation, but this can scarcely be distinguished clinically from catarrhal pharyngitis, which usually accompanies it, and of which it is a more or less prominent part. It is also a well-established fact that quinsy is at times communicable, or at least affects several persons of a family in succession, so that a specific infectious variety of tonsillitis might be recognized if we had any means of distinguishing it clearly from the preceding, except by the entirely incidental evidence afforded by its concurrence in a certain group of cases. Moreover, there are a certain number of cases of inflammation of the tonsils in which the Klebs-Loeffler bacillus is a factor, either primarily or secondarily; thus we have a *diphtheric tonsillitis*, which, on account of its highly infective character and the danger of spreading diphtheria, imparts to the problem of diagnosis in cases of tonsillitis, a gravity that is becoming daily more highly realized by the profession and the public.

A convenient practical division of cases of acute tonsillitis for ordinary purposes might be made by retiring from consideration the follicular element, and grouping the patients clinically into (1) catarrhal or superficial; (2) parenchymatous or suppurative; and (3) infectious, the last named being cases either of (*a*) specific or of (*b*) diphtheric tonsillitis.

As regards the causation of the different forms, it may be said that the catarrhal form is generally traceable to some unusual exposure to severe cold, or to a change of underclothing, or to some local irritation; while, on the other hand, the parenchymatous form is generally an expression of the rheumatic poison, and may be accompanied by joint-inflammation or by endocarditis or pericarditis, and frequently also by albuminuria. With regard to the infectious varieties, it is to be borne in mind that an inflamed tonsil coated with follicular exudation and mucus affords a good culture-soil for bacilli of various kinds, and is favorably situated anatomically for infection by the air-current during respiration, so that a case, even when not originally infective, may become so, and enter upon a much more serious phase than it presented at its inception. The diagnosis is sometimes rendered obscure by cases of mixed type, in which parenchymatous inflammation is accompanied by more or less catarrhal involvement of the surrounding structures.

In the treatment of a case of the superficial form of tonsillitis it is only necessary to keep the throat clean and apply the customary remedies for a catarrhal attack, or so-called ordinary "cold." Irrigation of the throat with salt

and water, or with the alkaline wash of sodium bicarbonate and biborate, potassium bicarbonate and potassium chlorid (a dram of the mixture to eight or ten ounces of hot water), frequently repeated, affords rapid relief. In addition to this, troches of sodium chlorate (grs. ij), introduced by Dr. Traill Green, of Easton, may be kept almost constantly in the mouth. These may be superseded by the potassium tablets, if there be a decided tendency to formation of suspicious membrane; but as the ordinary lozenges of potassium chlorate contain each five grains of the salt, care should be taken that the patient does not get a toxic quantity.

For general treatment, the patient takes a saline (one or two teaspoonfuls of effervescent sodium sulphate, or of some aperient salt), drinks hot lemonade, and adopts other means to increase the activity of the sweat-glands and kidneys. If the patient should be robust, and there is decided heat of skin, it is customary to resort to the use of tincture of aconite, one or two drops every hour for three or four hours, and then every two hours, or less frequently. In other words, the treatment is that of acute pharyngitis, including the wet compress or dry flannel to the neck. During the progress of the case the secretion pouring out from the mucous crypts may form a false membrane which tends to spread over the tonsil. If it can be easily wiped off with the point of a probe wrapped with absorbent cotton, and the surface of the tonsil looks as if the epithelium were intact, this feature is usually relied upon to distinguish it from a diphtheric case, in which the surface of the tonsil looks raw and bleeds after removal of the membrane. In point of fact, however, this test cannot be fully relied upon to differentiate the infectious from the non-infectious cases, and even the most experienced may occasionally find himself mistaken unless cultures are made, with bacteriologic and microscopic examinations, to determine the exact character of the micro-organisms present.

The second group is interesting, owing to its sometimes uncontrollable tendency to suppuration, and also to its acknowledged pathologic relationship to rheumatism. These cases very often have a distinct chill at the onset, followed by soreness of the muscles of the back and legs, with decided fever and prostration. The tonsils are less red in color, and usually the inflammation is restricted to only one, which is a deep-red or purple, and the follicles are comparatively unaffected. There is more constant pain than in the preceding form, and it is of a dull, throbbing character; the glands of the neck may also be enlarged and painful. The case may likewise be traced to exposure to dampness and cold, but there is also present a dyscrasic element that is well marked and harmonizes with the view already expressed as to its pathology.

The local treatment of acute parenchymatous tonsillitis is of less consequence than in the first form. When the parts are tense, scarification affords considerable relief by reducing the hyperemia. The crypts may also be explored with a probe so as to permit retained secretions to escape. Small pieces of ice may be held in the mouth and allowed to melt slowly. Gargling is usually too painful to be resorted to, but very hot water containing a little alkali (Seiler's tablets) may be held in the back part of the mouth, every half or quarter of an hour, with decided effect upon the congestion. A mercurial purge of ten or twelve grains of blue mass, or of half a grain of calomel and soda, repeated every hour until the bowels are moved, either being followed by a saline, will sometimes succeed in causing an attack to abort without going on to abscess. When there is much muscular soreness, or the case takes on a decided rheumatic appearance, salophen may be given in doses of five or ten grains every hour or two, and is followed by almost immediate benefit. It has been established by abundant clinical evidence that no drug can equal salicylic acid in controlling the manifestations of acute rheumatism, and for this purpose the pure vegetable salicylic acid is preferred. In salophen we have an agent that in the intestinal tract breaks up into salicylic acid and a non-toxic phenol-derivative. In the nascent condition the salicylic acid is decidedly more active than in its usual form. As the salophen yields only fifty per cent. of salicylic acid, it might be considered that the equivalent dose would be twice as great; but in fact it is only the same as that of salicylic acid (from forty to sixty grains daily). It has not the objections which inhere to the acid, and is said to be non-toxic. It is also tasteless and odorless, and easily administered. Being feebly soluble, it is best given in powder, pill, or tablet. If there is much pain, five grains of phenacetin may be added to each dose with decided advantage. An antirheumatic remedy that has been used largely in tonsillitis, and is highly indorsed by Prof. J. Solis-Cohen, is guaiac. The ammoniated tincture may be given (a dram in half a glass of hot milk) every two or three hours, and often with much benefit, or the Mackenzie guaiac lozenge may be used. In Prof. Cohen's clinic at Jefferson Medical College a hot-water gargle medicated with the ammoniated tincture (half a dram to a cupful of water) is generally resorted to. Fastidious patients, however, would prefer the more agreeable antiseptic wash of menthol, boric acid, and soda. Painting the tonsil with a ten per cent. solution of silver nitrate is sometimes of service, but the chief reliance should be placed upon constitutional treatment.

Any decided tendency to the formation of an abscess may be encouraged by the inhalation of steam, which may be medicated by the addition of compound tincture of benzoin and paregoric, equal parts; but the chief benefit is from the local action of heat and moisture. As soon as fluctuation, or pointing, of an abscess is found, the collection should be evacuated, preferably from the lowest portion of the tonsil, so as to favor drainage. The incision need not be painful; but, if desired, cocain may be used, or ice may be held in the mouth for a few minutes previously. The after-treatment calls for no especial comment. By proper attention to clothing, diet, and personal habits in the interval between attacks a great deal can be done toward obviating the tendency to recurrence in these cases. It is at least noteworthy that Prof. Dudley S. Reynolds some years ago pointed out a strong tendency to the occurrence of repeated attacks of tonsillitis in persons who indulge freely in sweetmeats and especially glucose, and more recently it has been announced, and the view is now very generally held, that a diet rich in sugars and starches particularly favors the development of acute rheumatism.

With regard to the false membrane that so commonly occurs in tonsillitis, especially in certain families, it can only be regarded as an extremely undesirable complication, and it should be the object of treatment to prevent its spread and remove it entirely at the earliest moment by the use of hydrogen dioxid, alkaline applications, or digestive agents, having always before the mind the possibility of infection. A case with abundant false membrane may turn out to be only catarrhal, while a comparatively innocent-looking case may communicate diphtheria of virulent type.

MEDICAL PROGRESS.

On a Modification of Golgi's Methods of Staining Nervous Tissue.—At the last meeting of the British Association for the Advancement of Science OLIVER S. STRONG described Golgi's methods of nerve-staining. These may be divided into two principal heads: 1. The sublimate method, consisting essentially of hardening in potassium bichromate, followed by immersion in mercuric chlorid. 2. The silver methods: (*a*) the long, or slow method, consisting in hardening for about twenty or thirty days in potassium bichromate, followed by immersion in a solution of silver nitrate. (*b*) The rapid method, in which the hardening is effected in a mixture of potassium bichromate and osmic acid. This is the method, slightly modified, which is so extensively used by Ramon y Cajal. (*c*) What may be designated as the mixed method, or combined method, and consists in hardening first for a few days, or a week or so, in potassium bichromate, then for a day or two in the osmium-bichromate mixture, and finally immersion in the silver-bath.

The rapid method is the best yet discovered for work on the peripheral terminations of nerves and for the embryonic central nervous system. It is not so well adapted for adult brains, owing to the poor penetration of the osmic acid and consequent liability to overharden the periphery, while the central portions of even small pieces remain untouched. Moreover, adult brains are not well adapted for the study of the nervous or axis-cylinder prolongations of the cells, owing probably to their sheath, so that with such material study by these methods would be chiefly directed to the cell-bodies and their protoplasmic expansions. For such purposes the long Golgi method is eminently adapted.

While the long Golgi method avoids the disadvantages, including the expense—no small consideration when large quantities are used—of osmic acid, it has the disadvantage of requiring about a month, besides the uncertainty common to all these methods. In order to reduce this period of time, and yet avoid the use of osmic acid, the new method proposed for the study of adult brains is the use of lithium bichromate instead of potassium bichromate, with the same percentages. Small pieces of tissue placed in the former reach the favorable stage of hardening for the silver-impregnation in the course of one or two days, instead of from twenty to thirty days. They pass through this favorable period quite rapidly, but the whole process is reduced to such a short time that it is rendered much less tedious. The pictures yielded by this process appear fully equal to those prepared by the other methods.

The subsequent treatment is as in the other methods —*i. e.*, the piece of tissue is rinsed in strong alcohol, cut free-hand, or gummed on a block without any imbedding, and cut with a microtome. The sections are washed in several changes of strong alcohol, cleared in oleum origanum cretici, washed briefly in xylol, and mounted in dammar or Canada balsam, thinned with xylol, without a cover-slip.

It would be interesting to ascertain how well adapted this new hardening reagent is for preparing the central nervous system for other methods of staining—*e. g.*, the Weigert method.

General Paralysis of the Insane in a Child.—THOMPSON and DAWSON (*Lancet*, No. 3729, p. 397) have reported a case of general paralysis of the insane in a girl, setting in at the age of ten years and eight months, running a course similar to that most commonly observed in women, and ending in death after a steady breakdown of the bodily and mental powers during a period of two years and four-and-a-half months.

Post-mortem examination disclosed the existence of typical lesions. The outer and inner tables of the calvarium were thickened, and the dura mater was thickened and adherent in places, especially along the superior longitudinal sinus, while in other places it was separated from the bone by false membrane. The cerebral aspect of the dura likewise was lined with false membrane of varying thickness, and which was loosely adherent to the arachnoid. There was an excess of sub-arachnoid fluid, and the pia was universally adherent to the cortex. There was an abnormal attachment between the anterior lobes of the brain, just in front of the genu of the corpus callosum. There was marked superficial atrophy of the brain, most pronounced in the frontal and parietal regions. On section, the cortex was atrophied and toughened. The white matter was pinkish in color, and though of soft consistence was also tough. The ganglia were soft and friable. The ventricles were dilated and contained turbid fluid, whilst the ependyma was thickened and tougher than normal. Granulations were found in the pia, especially along the vessels and also on the floors of the lateral ventricles and of the fourth ventricle as well. The soft commissure of the third ventricle was exceedingly tough. The cerebellum presented much the same conditions as the cerebrum. Microscopic examination of the brain and cord confirmed the existence of degenerative changes.

Association of Respiratory Paralysis with Cardio-pulmonary Symptoms in Diphtheric Paralysis.—At a recent meeting of the Medical Society of London, PASTEUR (*British Medical Journal*, No. 1779, p. 251) reported the results of an analysis of thirty-two cases of diphtheria, of which nineteen terminated fatally, and seventeen of these presented bulbar crises. In five cases in which the diaphragm had been paralyzed for two or more days there was an extreme degree of collapse of the lungs after death, especially of the right base, which in two cases sank entirely in water. In other cases in which the paralysis had been of short duration or was entirely absent there was little or no pulmonary collapse. The extent and

degree of collapse appeared to be directly proportionate to the duration and degree of the paralysis. The following conclusions were announced: The mortality in diphtheric multiple paralysis is probably higher than current opinion would lead one to suppose. Death takes place by asphyxia. The fatal symptoms are in the large majority of cases of sudden onset, and suggest a bulbar origin. Recovery from a bulbar crisis is exceptional. Paralysis of the diaphragm is comparatively frequent, and may occur either acutely, as part of the bulbar crisis, or may develop immediately as part of a peripheral paralysis. The supervention of respiratory paralysis very seriously increases the gravity of the prognosis. Whenever paralysis of the diaphragm, or other part of the chest-wall, is long continued (two or more days), collapse of the adjacent lung is very liable to occur, and may give rise to definite physical signs. The base of the right lung is more liable to be affected in this way than the left.

Traumatic Glycosuria.—As a result of personal observation in conjunction with an analysis of the literature of the subject, HIGGINS and OGDEN (*Boston Medical and Surgical Journal*, vol. cxxxii, No. 9, p. 197) conclude that after injury to the head sugar may appear in the urine as early as six hours and disappear within twenty-four; the average time for its appearance, however, being from eight to twelve hours, for its disappearance, from the fifth to the ninth day. A small proportion of the cases may exhibit glycosuria from the date of injury. Acetone and diacetic acid are rarely, if ever, found in such cases, excepting when the glycosuria becomes permanent, and even then probably not after a number of months or years. Of twenty cases of glycosuria recorded in the paper, eleven (55 per cent.) had received an injury to the right side of the head, five (25 per cent.) to the left side; three (15 per cent.) of the occiput, and two (10 per cent.) failed to present external evidence of violence. It is believed to be impossible in the present state of the knowledge of the pathology of diabetes and glycosuria to draw any inferences from the autopsies that have been made. Of the twenty cases reported, eight died, six from direct results of injuries, one from intercurrent disease, and the remaining one probably from alcoholism. In a collection of 212 cases, 16 were fatal, and 50 per cent. of these presented glycosuria.

A New Mode of Treating Placenta Prævia Centralis.—NIJHOFF (*Centralblatt für Gynäkologie*, 1895, No. 8, p. 210) has reported the case of a woman in whom, in the course of her third pregnancy, the existence of placenta prævia was suspected from the occurrence of hemorrhage and a relaxed and flabby condition of the lower uterine segment and the vaginal portion. At the conclusion of pregnancy, and with the recurrence of hemorrhage, the os being insufficiently dilated and the pains feeble, the vagina was tamponned with iodoform-gauze. The bleeding, however, persisted, and it was concluded to penetrate the presenting placenta with the finger, to practise version, bringing down a foot, and then to proceed slowly or to wait, according to circumstances. The placenta was readily torn through, and the amnion detached itself and followed through the artificial opening made. It was now concluded to permit the labor to proceed spontaneously. The vagina was again tamponned, and pains soon returned and became vigorous. Finally, sufficient dilatation had taken place, and the fetus followed the membranes through the rupture made in the placenta. The placenta was expelled in the course of a half-hour without extraordinary hemorrhage, and there were no further complications. The child was well developed and robust.

THERAPEUTIC NOTES.

The Treatment of Diphtheria with the Antitoxin.—At a recent meeting of the Société Médicale des Hôpitaux SEVESTRE and MESLAY (*Le Mercredi Médical*, 1895, No. 10, p. 114) reported the employment of the antitoxin in the treatment of one-hundred-and-fifty cases of diphtheria examined bacteriologically and presenting diphtheria-bacilli, with fifteen deaths (10 per cent.). Excluding cases in which death took place within twenty-four hours of admission to the hospital, the percentage of deaths was reduced to 6.6 per cent.

WITHINGTON (*Boston Medical and Surgical Journal*, vol. cxxxii, No. 11, p. 249) reports eighty cases of diphtheria treated with the antitoxin during December, 1894, and January, 1895, with thirteen deaths (16 per cent.). Eleven additional cases presented the clinical picture of diphtheria, but were excluded from the statistics, because of failure to find diphtheria-bacilli. In addition to the specific treatment, frequent feeding was resorted to, and alcohol, iron, and cardiac stimulants administered as required. Locally, irrigation was practised with a normal salt-solution or diluted Dobell's solution whenever it could be done without provoking great resistance on the part of the patient. During the same period forty cases of diphtheria presenting diphtheria-bacilli were treated without the antitoxin for various reasons, such as lack of serum, lateness in the disease, a moribund condition of the patient, a negative report upon first examination as to the presence of diphtheria-bacilli, and mildness of the disease. Among this number there were twelve deaths (30 per cent.). This group was believed to represent rather less than the average gravity, while the first group represented rather more than the average severity.

RISEL (*Deutsche medicinische Wochenschrift*, 1895, No. 10, p. 165) reports the employment of the antitoxin between November 11, 1894, and January 15, 1895, both in private and in hospital practice, in one-hundred-and-fourteen cases of diphtheria at the hands of thirty different physicians, with nine deaths (7.89 per cent.). Bacteriologic examination was made in but a small number of the cases.

For the Prevention of Tuberculosis SIR BENJAMIN WARD RICHARDSON (*Asclepiad*, second quarter, 1894–'95, p. 147) gives the following sanitary decalogue: First, pure air for breathing. Second, active exercise, outdoor as much as possible. Third, uniformity of climate. Fourth, dress that will sustain uniformity of warmth. Fifth, careful regulation of the hours of rest by the sunlight. Sixth, outdoor occupation. Seventh, amusements that favor muscular development and sustain healthy respiration. Eighth, cleanliness in the broadest sense. Ninth, the avoidance of the ill-effects of cold. Tenth, an ample diet, with a full proportion of the respiratory foods.

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TUBERCULOSIS IN HOSPITALS FOR THE INSANE.

NEARLY a year ago it was found, after diagnostic tests with tuberculin, that tuberculosis existed among a herd of Holstein cows at the State Asylum for the Insane at Norristown that had been purchased a year or more previously, and from which a portion of both the milk-supply and the food-supply of the institution was derived. As the investigation proceeded it developed that a large number of animals were infected, and these were accordingly destroyed. The number thus disposed of has reached the neighborhood of 200. The slaughtered animals were buried in a grove some distance back of the hospital, being covered with quicklime and three or four feet of earth. In some of the cases the diagnosis was based upon the symptoms and physical signs; tuberculin was employed only in those cases in which these means failed.

Appreciating the importance of the event, and with a view to reach some practical deductions as a result of so expensive and so dangerous, withal involuntary, an experiment, THE MEDICAL NEWS endeavored last summer to obtain such information from authoritative sources as would best subserve these purposes, but without success. One proffer of aid was soon withdrawn, and there appeared a lack of readiness and frankness in giving information that dissipated all hope of a thorough investigation. Application to a member of the Board of Trustees for information was met with the statement that the matter was in the hands of the official pathologists, from whom a full report was soon expected, and which would be placed without delay in the hands of the medical journals. This report has not yet been received, although the promise of early publication is still held out.

Realizing that little information or aid could be obtained voluntarily from those who were in the best position to give it, THE MEDICAL NEWS appointed a special commissioner to make an inquiry as to the influence, if any, exercised by the use of the milk and flesh of tuberculous cows upon the morbidity and mortality among the patients at the Norristown Hospital. Inadequate as are the data and inconclusive as are the results, we feel that they should not be lost, and hope that they may soon be supplemented by the long-waited-for official report.

Our commissioner made a comparative study of the mortality from tuberculosis for a period of ten years, not only at the Hospital for the Insane at Norristown, but at the Harrisburg, the Danville, the Western Pennsylvania, the Philadelphia, and the Pennsylvania Hospitals for the Insane, and has prepared two tables, showing (1) the percentage of deaths from tuberculosis among the total population in these institutions, and (2) the percentage of deaths from tuberculosis among the whole number of deaths from all causes.

One cannot but be struck by the high mortality from tuberculosis, both relatively and absolutely, shown by these figures; nor can it be said that the position of the Norristown Hospital is one to be proud of, standing in the one table fourth and in the other fifth among six in the average mortality from tuberculosis for a period of ten years, being surpassed only by the Western Pennsylvania and the Philadelphia Hospitals. The figures of the Pennsylvania Hospital, on the other hand, are worthy of careful study and successful emulation. Beautifully situated in the open country, remote from the crowded city, with ample grounds, the conditions at Norristown should be favorable to the lowest morbidity and mortality as regards tuberculosis, as well as other diseases, rather than the highest figures. We do not forget that the mental and physical condition of the patients at Norristown,

TABLE I.—SHOWING PERCENTAGE OF DEATHS FROM TUBERCULOSIS AMONG TOTAL POPULATION.

	Norristown.	Harrisburg.	Danville.	Western Penn'a.	Philad'a Hospital.	Penn'a Hospital.
1884	1362 : 1.3	526 : 0.5	528 : 0 5	687 : 1.3	880 : 2 5	546 : 0.1
1885	1730 : 2.1	564 : 0.8	859 : 1.2	719 : 2.2	889 : 0.8	505 : 0.3
1886	1847 : 1.5	575 : 1.7	996 : 1.0	742 : 1.2	435 : 0.6	536 : 0.0
1887	1964 : 0.9	611 : 1.8	1054 : 0.4	795 : 2.1	609 : 0.4	570 : 0.5
1888	2229 : 2.1	769 : 0.7	1055 : 0.8	843 : 3.2	898 : 0.8	520 : 0.5
1889	2143 : 1.2	875 : 1.1	1093 : 0.4	906 : 1.8	1052 : 1.3	524 : 0.5
1890	2307 : 1.9	922 : 1.5	1140 : 0.8	960 : 2.5	919 : 3.6	565 : 0.7
1891	2362 : 1.9	1009 : 1.2	1251 : 0.8	1005 : 5.0	932 : 3.9	585 : 0.1
1892	2382 : 2.0	1029 : 1.4	1324 : 1.0	989 : 4.1	1012 : 5.2	598 : 0.5
1893	2381 : 2.8	1008 : 2.1	1248 : 0.9	996 : 2.5	1066 : 6.0	599 : 0.0
1894	2450 : 3.2					
Gen. av.	1.9	1.3	0.8	2.7	2.8	0.3

TABLE II.—PERCENTAGE OF DEATHS FROM TUBERCULOSIS AMONG THE WHOLE NUMBER OF DEATHS FROM ALL CAUSES.

	Norristown.	Harrisburg.	Danville.	West'n Penn'a.	Phila. Hosp.	Penn'a Hosp.
1884	18.7	8.3	10.4	13.0	25.2	3.0
1885	30.4	11.1	26.8	27.0	14.2	6.0
1886	22.0	20.0	20.4	20.9	10.0	0.0
1887	11.6	25.0	9.6	22.0	7.5	9.6
1888	25.3	11.5	15.7	27.6	14.8	7.1
1889	25.9	16.9	6.1	28.8	12.3	13.0
1890	22.6	20.0	12.8	33.8	33.9	11.7
1891	23.5	15.8	14.4	42.5	36.2	2.8
1892	24.0	18.2	20.2	35.0	27.0	8.3
1893	33.0	32.3	17.1	25.0	30.2	0.0
1894	36.9					
Gen. average	25.4	18.5	14.9	29.0	24.9	6.1

with the resultant, and sometimes necessary, mode of life, predisposes to the development of tuberculosis; but we have thus far considered only relative values. We are, however, willing to go a step further and maintain that if the insane were surrounded by the same hygienic conditions as the sane, the disease and its fatality would be scarcely greater in the one class than in the other. What all tuberculous patients and those predisposed to tuberculosis most need is an abundance of fresh air, sunshine, and plenty of nutritious and easily assimilable food. Sick and well should also, so far as possible, be kept apart, and the ordinary rules of hygiene observed, with special attention to cleanliness and care of the discharges. We cannot agree with the statement made in the Annual Report of the Norristown Hospital for 1894, that there is "a close relation between consumption in the parent and insanity in the offspring." Were this true, insanity should be even more common than tuberculosis.

The following additional information was obtained by our commissioner:

"Careful physical examination of each female patient is made on admission, and if tuberculosis is present the fact is noted.

"Staining of the sputum for tubercle-bacilli is practised for diagnostic purposes when tuberculosis is suspected.

"The number of patients showing signs of tuberculosis on admission is very small. Of the twenty-one women at present having signs of tuberculosis, not more than one was considered tuberculous on admission.

"The diagnosis of tuberculosis is a rather difficult matter in an insane subject; a case may progress to a considerable extent without any cough, owing to the lowered nervous tone; many patients, when physical examinations are made, will refuse to breathe, and some become violent when anyone approaches them, so that in such cases physical examinations would be useless. The diagnosis is sometimes made from signs of hectic, evening fever, and sweats.

"The tuberculous patients are not segregated. This has been considered, but one obstacle in the way is that it might necessitate placing one patient who is sane almost all the time with one who is chronically insane and of filthy habits.

"Post-mortem examination sometimes reveals well-advanced lesions of tuberculosis when none had been suspected, for reasons already mentioned. [Probably if a necropsy were held in every case dying in the hospital the number of deaths due to tuberculosis would be found to be still larger.]

"About six female patients were sent home to die during last year at the request of relatives.

"The beef used for the inmates is carefully inspected.

"The milk is obtained from Montgomery County farmers, and is boiled before being used.

"Probably not more than six of the male patients are tuberculous. There is no record from which exact figures can be learned. Careful examination of each patient is made on admission, or as soon thereafter as the patient will allow it."

There appears to be some disparity between the statement that at present not more than six of the male patients have tuberculosis, and the fact brought out in the annual report for 1894, that of a total of 122 deaths in the department for males, 31 (23.41 per cent.) resulted from "phthisis pulmonalis" and 3 from general tuberculosis. Of the total of 92 deaths in the department of females, 45 (48.9 per cent.) were attributed to tuberculosis.

Where further shall we look for an explanation of the fact that with practically the same daily average number in the wards for both males (965) and females (970), and an approximately equal number of cases throughout the year (1262 male, 1223 female), there was a so much larger number of deaths from tuberculosis, both relatively and absolutely, among the females? On the other hand, the much larger number of deaths from all causes among the males (122 in 1262—9.67 per cent.), as compared with the females (92 in 1223—7.52 per cent.) is, to say the least, startling.

We have now gone as far as the facts admitted will permit us. We have seen that a large proportion (a very large proportion, even larger than in other similar institutions in the State) of the deaths at the State Hospital for the Insane at Norristown are attributable to tuberculosis; and if modern investigation has taught anything, it has demonstrated that tuberculosis is both a preventable and a curable disease. Now how can we explain its great prevalence at Norristown? Is it due to defect in quality or insufficiency in quantity of the food, or to errors of hygiene? To one or several of these it must be due. We have not the information upon which to base an opinion. It would scarcely be justifiable to attribute it to a peculiarity of the patients, for these probably differ little from those admitted to other and similar institutions. The problem should not be a difficult one for the authorities to solve. If they will look for the cause, it cannot escape them. The cause once found, the remedy will suggest itself.

SUDDEN DEATH IN THE COURSE OF TYPHOID FEVER.

THERE is yet a good deal to learn concerning typhoid fever, in spite of the fact that the disease is one of the commonest and most widespread and its symptomatology so well known. There remains much to be cleared up in the pathology of the disease, and for this elucidation we must await the further development of what may conveniently be designated biologic chemistry.

The only prophylactic measures at our command are of a general rather than a special nature; nor can it strictly be said that we are in possession of a specific means of treatment. As the infection is conveyed largely by water, and gains entrance through the gastro-intestinal tract, many cases—no doubt the vast majority—would be prevented if all water and milk intended for consumption were first thoroughly boiled. In the line of treatment the best means at our command is the Brand bath; but this cannot be considered specific, and it must be admitted that its universal application is attended with difficulties at times of insurmountable character, while certain complications contraindicate its use in some cases.

In the light of recent developments we feel that it is reasonable to hope that in the not very remote future the laboratory will provide us with a biologic remedy for the treatment of typhoid fever comparable in its specificity with the use of quinin in malaria, of mercury in syphilis, and, we feel justified in adding, of the respective antitoxins in diphtheria, cholera, and tetanus. This hope seems the more justifiable inasmuch as typhoid fever is a self-limited disease, and it may be safely assumed that its termination is brought about by the development of conditions unfavorable to the existence of the typhoid bacilli and of substances that exert an antidotal action upon their toxic products.

It must be remembered that in none of the conditions named is the specific to be viewed as an infallible remedy. We may assume that it acts either as an antagonist to the primary cause of the disease (animal or vegetable organisms) or as an antidote to the poisons secondarily generated (toxalbumins). The result in any given case must depend upon the reaction between the various operative influences. The specific cannot be expected to influence developed complications, intercurrent affections, secondary infections, and sequelæ.

In what degree complications and sequelæ may be averted or modified by such specific treatment as is here spoken of, even though the original disease be not perfectly aborted, only future study can determine. In some of the infectious diseases these complications are but manifestations of the general infection, in others they represent the effects of intoxication with the products of the causative agency, and in still others they result from secondary infection or from derangement of physiologic or mechanical processes in parts adjacent to the seat of disease.

Of the infectious diseases there is none, perhaps, whose course is so treacherous and whose outcome is so uncertain as typhoid fever. This is partly so because the principal lesions are beyond the range of satisfactory physical examination, and partly because the general symptoms are not a safe index of the pathologic process. It thus happens that the

first intimation of intestinal hemorrhage may be a sudden decline in temperature, with or without general pallor and other symptoms of loss of blood. The first confirmation of the event may be brought by the tarry stools that follow, and even these may be wanting if constipation exists and the extravasated blood is retained in the bowel.

A further danger in the course of typhoid fever, as it must be recognized to be in the course of any of the infectious diseases, is the occurrence of sudden death. This may happen in the absence of evidence of disease of the heart involving its muscular structure, its serous layers, or its valvular apparatus. Various causes have been assigned for the event; among them may be mentioned a reflex influence upon the bulb through the intestine, cerebral anemia, cardiac thrombosis, pulmonary embolism, anemia, typhoid intoxication, inflammation of the pneumogastric nerves, obliterative endarteritis, and myocarditis.

A case belonging in the last category has recently been reported by HOBBS (*Archives Cliniques de Bordeaux*, 1895, No. 1, p. 35), who relates the case of a man, nineteen years old, in which sudden death took place on the eighteenth day of an attack of typhoid fever presenting symptoms of ordinary severity. Upon post-mortem examination, in addition to intestinal ulceration and enlargement of the spleen, the heart was found relaxed and flabby and of pale color. Microscopic examination of the myocardium disclosed a condition of acute inflammation characterized by a peculiar fragmentation of the muscular fibers. This mode of termination of typhoid fever is, as one would naturally expect, uncommon early in the attack. Its frequency increases with the progress of the disease, to become greatest during the period of defervescence and beginning convalescence. Among 146 cases collated by DEWÈVRE[1] sudden death occurred in the first week in 2; in the second week in 22; in the third week in 54; in the fourth week in 37; and in the fifth week in 31. There is no single remedy or combination of remedies that can be recommended to avert such an unfortunate accident. Its prevention, in so far as this lies in the power of man, is included in the general management of the case, having in view the natural history of the disease and its attendant complications, and will require the finest judgment and fullest resource.

[1] Archives générales de Médecine, October, December, 1887.

EDITORIAL COMMENTS.

Suggestions to Hospital-visitors.—In a little brochure just issued by the J. B. Lippincott Company Dr. John S. Billings, in his capacity as Director of the Hospital of the University of Pennsylvania, and Dr. Henry M. Hurd, the efficient Superintendent of the Johns Hopkins Hospital, tell in a charming manner the ways and means by which hospital-visitors may best meet the obligations they voluntarily assume in accepting their positions. As Dr. Weir Mitchell in his brief and effective introduction puts it, the little book is to be commended to "all who, being managers, trustees, or in any way connected with hospital-work, are not contented to assume an official name and remain ignorant of how honestly to fulfil the duties which should go with it." It "is meant to assist untrained observers, yet even the most expert manager of a hospital or the ablest medical observer ought to find in it valuable hints."

It is well pointed out that in the performance of his duties the visitor should be moved by a spirit of friendliness for the hospital and its direction and not by a desire merely to criticise from preconceived notions. He must have eyes that see and ears that hear, together with a mind capable of weighing evidence, of reaching just conclusions and suggesting appropriate remedies; yet he must never forget that he sees but one phase of the picture, or at least that he may not be a competent judge in many instances. To his task he must bring the most delicate tact in conjunction with rare discrimination.

The visitor must, first of all, become acquainted with those to whom is intrusted the duty of administering the affairs of the hospital, and with their aid familiarize himself with the details of management, in order that he may be of help in the work of execution and improvement. It must not be forgotten that while the primary and the main object of a hospital is the relief of suffering and the cure of disease in the individual, a secondary but yet important one is the enlargement of the general fund of knowledge of disease and the improvement of methods of treatment.

The most cordial and respectful relations should be encouraged among the various divisions of the administrative and executive arm of the hospital, and those who come under their care should receive due consideration and their needs proper attention. Especial study may advantageously be devoted by the hospital-visitor to the building, its general ventilation, temperature, light, cleanliness; the ward, its hygiene, care, and discipline; the patients, their food, dress, and treatment; protection against and provision in case of fire; the management of the kitchen; the quantity and quality of the food, its mode of preservation; inspection of laundry, pharmacy, operating-room, mortuary, etc. In hospitals for the insane the duties of the inspector are, for obvious reasons, even more important than in general hospitals. Especial attention should be directed to the attendants and their conduct, the food, the clothing, the occupations and amusements of the patients, the precautions against fire, the means of restraint, bathing, the care of the sick, night-service, and the matter of admissions and discharges.

Intelligently performed the work of a hospital-visitor may yield the happiest results and be productive of

boundless good; but governed by a spirit of faultfinding and captious criticism it may be the source of much discord and friction and interfere greatly with the full usefulness of a noble object.

The little book, upon which we have freely drawn in the foregoing remarks, will prove a useful aid in effecting a good end, and the thanks of the profession and of the community are due to those who have suggested its preparation and those who have so efficiently dealt with the suggestion.

The Prevention of Blindness.—The relation between neonatorum conjunctivitis and the large amount of blindness in the world is so well established as to require no comment here.

There may be some question whether or not the infection can in all instances, as matters go, be prevented; but there is no difference of opinion that, with prompt and appropriate treatment, the inflammation can in almost all instances be controlled and its disastrous consequences averted. Any measures having this object in view should receive the cordial support, not only of the medical profession as a body, but of all intelligent people as well. In several States legislation has already been enacted with the aim of supporting this laudable endeavor, and in many others, including Pennsylvania, agitation of a similiar nature is in progress. The time is not distant when in every State in this country newborn children will be surrounded by such legal safeguards as shall protect them from blindness due to conjunctival infection during or soon after parturition. In this commendable effort the Medical Society of the State of Pennsylvania and the Philadelphia County Medical Society have actively engaged, each having appointed committees to which the matter was given in charge. These committees have formulated the following preamble and resolution for presentation to the Legislature:

WHEREAS, Statistics, compiled in this country and Europe, demonstrate that fully 25 per cent. of the blind owe their affliction to an inflammation of the conjunctiva, appearing a few days after birth; and

WHEREAS, Experience has proved that the inflammation can be cured and the eyesight saved in the majority of cases if treatment be instituted at an early stage of the disease; and

WHEREAS, Destruction of the eyes and blindness are usually the result of delay of treatment, be it

Resolved, That we heartily recommend that the people of the State of Pennsylvania, represented in Senate and Assembly, do enact as follows:

SECTION 1. Should one or both eyes of an infant become inflamed or swollen or reddened at any time within two weeks after birth, it shall be the duty of the midwife or nurse having charge of such infant to report in writing within six hours to the Health Officer or some legally qualified practitioner of the city, town, or district in which the mother of the child resides, the fact that such inflammation or swelling or redness exists.

SEC. 2. Any failure to comply with the provisions of this Act shall be punishable by a fine, not to exceed two hundred dollars, or imprisonment, or both.

A bill embodying the recommendations of the resolution was to have been presented to the Legislature on March 25th. It should receive the unanimous support of the members of that body, and should be adopted without delay, having, as it does, so important and direct a bearing upon the material welfare of the Commonwealth.

Health and Athletics.—In an interesting lecture delivered before the Shaftesbury Club, Oxford, Sir Benjamin Ward Richardson (*Asclepiad*, second quarter, 1894–'95, p. 125) considered, in his usual masterly manner, the advantages and disadvantages of athletics, together with the effects of special exercises and the part that exercise should hold in university life. He contended that good exercise combines mental with physical endurance, and that those persons are most finely balanced in whom the mental as well as the physical powers are sustained together.

Among the disadvantages are irregular development of certain parts of the body from faults in training or in the selection of unsuitable exercises. Further, the condition known as fatigue-fever may result from excessive or injudicious exercise. From a mental aspect it is considered always bad practice to permit exercise, and, particularly, competitive exercise, to affect the mind too seriously. For practical purposes exercise may be considered in three classes: The first includes physical acts in which particular groups of muscles are actively moved until they become affected, but without interference of a serious kind with the functions of the other organs of the body, such as lifting weights, working dumb-bells, and bell-ringing. These are to be suspended as soon as a muscle or group of muscles begins to be weary, as indicated by pain or soreness. In the second class belong those exercises in which the breathing or respiratory system is exceptionally affected, such as rowing. These require a certain respiratory capacity, without which they should be indulged in with great caution, as they may otherwise occasion serious respiratory or circulatory derangement. The third class of exercises includes those in which the action of the heart and the circulation are primarily and most distinctly concerned, such as running, cycling, dancing, and football. Indulgence in these calls for great prudence in order to avoid excesses. In the fourth class of exercises belong those in which the nervous system becomes particularly influenced, and in which that system is reduced in power or worn-out by efforts of too severe a kind, such as walking and climbing. In these also the danger is from excesses. The practice of subsisting on excess of animal food and the taking of heavy meals while training for manly exercise is strongly condemned. The diet, it is contended, should be of a mixed kind, with rather a tendency to a vegetarian fare, and the meals should be equally divided into four moderate portions per day in nearly equal quantities. Water, pure and simple, is undoubtedly the best drink. The clothing should be porous, so as to allow the freest perspiration from the skin. For good work, from seven to eight hours of sleep in the twenty-four are actually necessary. Every care should be taken to avoid mental excitement in competition. Smoking is to be eschewed, and the bath is to be taken regularly as a good aid.

A Year at the Eastern Penitentiary.—From the Annual Report of the Penitentiary for the Eastern District of

Pennsylvania for the year 1894 it appears that with an average daily population of 1300 there were but 12 deaths; there were besides 31 other cases of illness, of which 16 were cured, 5 improved, and 10 still under observation. Considering the character of the population, together with the previous habits of life of its individual elements, in connection with the depressing and otherwise unfavorable influences of incarceration, these figures must be considered as quite creditable to the hygiene and medical management of the institution.

It is an interesting sociologic fact that the inmates are derived largely from the idle classes. Less than one-seventh of those admitted had trades. The obvious lesson ought not to be lost. The best antidote to all forms of vice and evil is useful occupation. More than half of the prisoners were, by their own admission, "moderate drinkers," while nearly 30 per cent. confessed "occasional intemperance," and but 6 of 658 were simply "intemperate." Moderation in all things is a safe precept to follow.

That imprisonment does not reform is shown by the fact that more than one-third of the sentenced had been convicted once or oftener before. In the absence of other corrective measures, it appears that it might be well to add a special penalty for successive convictions.

Newspaper Reports of Prolificness.—According to a report much republished of late in the newspapers, a certain couple called Mr. and Mrs. George G. Danville, a farmer and wife said to be living near Yankton, South Dakota, were reported as having twenty-seven children, all born in triplets, the oldest being less than thirteen years old. Having had some experience in the falsity of such reports, we wrote to a reputable physician of Yankton, who investigated the story and reports that no such persons live or ever have lived in the county. Twenty-eight letters for "Mr. Danville" are lying unclaimed in the Yankton post-office. One wonders what motives inspire the newspaper-reporters in periodically starting such stories on their rounds. The custom shows how skeptical medical writers and statisticians must be in repeating these concoctions of the vivid reportorial brain.

The Influence of Heredity on Length of Life.—Sir Benjamin Ward Richardson (*Asclepiad*, second quarter, 1894–'95, p. 154), in a study of the history of five-hundred individuals whose deaths were recorded side by side with their parentage, found that within a certain range the combined years of parentage, if divided by two—accidents, of course, being excluded—presented fairly the life-value of the offspring. The results were closer when the grandparentage was included in the calculation. It was further observed that, when the parentage had arrived at a good age, there was a tendency on the part of the offspring to improve on it.

SELECTION.

THE MUTILATION-MARKET AND THE BUSINESS OF MENDICANCY.

AUSTRO-HUNGARY is acquiring an evil preëminence in the manufacture of deformity and "lusus naturæ." Some eighteen months ago we commented on the discovery made by the Croatian police of a regular mutilation-den, where boys and girls of tender years were distorted or maimed to supply the mendicancy-market—and where, by fracture or by continuous pressure between boards tightened by screws, the legs and arms and spinal columns of these poor little victims were made to assume monstrous shapes—where even the eyes were gouged out and artificial sores created—all to provide the traffickers in street-begging with "objects" wherewith to solicit the alms of the benevolent. The arrest and punishment of these purveyors of deformity seem, however, to have put no effective stop to the practice, for we read in a Hungarian journal that at Prague a man, Proschaska by name, was taken into custody charged with selling to the firm of Ritter & Munster, of Holstein, a number of children who, by means of specially contrived alimentation, had had their growth arrested for exposure as "Liliputians" in itinerant exhibitions. For every child so stunted and maltreated the sum of 300 florins was paid. We further read that not only were the authors of the "Liliputianizing" system brought to justice, but also the unnatural parents who consented to its being applied to their offspring, and who received money for doing so. This is, of course, quite commendable on the part of the law; but we fear its heaviest punishment will have small deterrent force so long as the public does not coöperate in suppressing the "business of mendicancy." Indiscriminate almsgiving lies at the root of the whole evil. Rather than take the trouble to ascertain where relief can most worthily and effectively be bestowed, the so-called "benevolent" man will lavish his small change on every beggar who crosses his path, thereby creating half-a-dozen similar beggars for everyone he subsidizes, and depriving the really well-organized charities of the funds of which they are sorely in need. One of the most large-hearted economists of his generation, Archbishop Whately, congratulated himself at the close of his life that he never gave a penny to a beggar, but that the money withheld from such objects had been profitably bestowed on the institutions, medical and other, where succor was vouchsafed only to the deserving. If the public acted with equal wisdom and stiffened its back against the professional mendicant, while relaxing its pursestrings in support of well-accredited charities, an end would speedily be made of the "business of beggary" with all its concomitants of "mutilation-dens" and "Liliputian farms," and "lusus naturæ" manufactured and supplied to order. We hope the subject will be adequately discussed at the International Congress for the Protection of Infancy, which will meet next July at Bordeaux.—*The Lancet*, March 9, 1895.

CORRESPONDENCE.

THE ADMISSION OF IRREGULARS TO MEDICAL SOCIETIES.

To the Editor of THE MEDICAL NEWS,

SIR: In the Editorial Comments in THE MEDICAL NEWS of March 16th you speak of the action of the Cleveland Medical Society in voting to admit irregular practitioners to its membership. This motion was on reconsideration not favorably acted upon, but as one of

those who voted in favor of the motion, I would like to give my reasons, as I do not believe that I look at the matter from the same standpoint as the majority of those who voted in favor of this freer admission to membership.

Undoubtedly the great majority of homeopathic practitioners are men ignorant of the fundamental branches of medicine; especially is this true with respect to physiology and pathology. The younger and the brighter men who have been unfortunate enough to be educated in a homeopathic school soon realize this after being admitted to practise. But the regular societies make martyrs of them, and they must be homeopaths or nothing. If they were allowed to come into the regular societies without going down on their knees and confessing that they have been sinners, and being forced to renounce their previous faith, they would soon after admission stop preaching homeopathy, as they became accustomed to their new positions, with that gradual change of mind that good fellowship produces. The majority of them now do not practise homeopathy, but they are forced to preach it in self-defence.

If the admission to the regular medical societies was based upon merit and ability, the homeopathic societies would gradually lose all their better lights, and the men who belonged only to their societies and could not join the regular would soon be recognized by the public as an inferior class of men, while now the public regard them as martyrs, the homeopaths saying, "they believe one thing, we believe another—it is only a matter of opinion."

Hoping to see the day when homeopathy will die a natural death from lack of condemnation,

I remain,

Very respectfully yours,

OPTIMUS.

CLEVELAND, OHIO.

[We are glad to learn that the Cleveland Medical Society, which has shown itself to be both progressive and enlightened, has receded from the unwise position that it took in sanctioning affiliation with sectarians. We regret, however, to be unable to agree with our correspondent in the stand that he takes. We would not ask any reputable physician to fall upon his knees and make confession in order to gain admission to a regular medical society, but the least that he could do would be to drop all sectarian designation and renounce dogma of any and all kind, for science knows neither creed nor dogma. Better still would it be to secure the indorsement and the degree of some recognized regular college.—ED. THE MEDICAL NEWS.]

NEWS ITEMS.

The Shelby County Medical Society will hold its seventh annual meeting at Shelbyville, Indiana, on April 8, 1895. The following program has been arranged: Address of Welcome, Dr. H. M. Connelly. Is the Removal of the Rectum for Malignant Disease Ever Justifiable? Dr. J. M. Mathews, Louisville. A Plea for Surgical Interference in Malignant Growths, Dr. A. C. Bernays, St. Louis. The Management of Fever and its Sequelæ, Dr. Jas. H. Taylor, Indianapolis. Gastro-enterostomy, Dr. R. Harvey Reed, Columbus, Ohio. Cholecystotomy, Dr. Edwin Ricketts, Cincinnati. Hysterical Joint-affections, Dr. P. S. Conner, Cincinnati. Tuberculous Peritonitis, Dr. L. H. Dunning, Indianapolis. Quinsy—Its Causes and Prevention, Dr. L. C. Cline, Indianapolis. A Paper, Dr. R. B. Hall, Cincinnati. The Indications for Operative Treatment in Fibroid Tumors of the Uterus, Dr. L. S. McMurtry, Louisville. Gangrene—Report of a Case, Dr. M. Drake, Shelbyville, Ind.

Dr. William S. W. Ruschenberger, an eminent naval surgeon and scientist, died March 24th in Philadelphia at the age of eighty-eight years. He was a graduate of the University of Pennsylvania and served with distinction in the medical service of the U. S. Navy. In 1871 he was commissioned Medical Director on the retired list, with the relative rank of Commodore. He was an active member of the Academy of Natural Sciences, whose Vice-President and President he had successively been. He was a notable Fellow of the College of Physicians, whose Secretary and Vice-President he had been. He was also a member of the American Medical Association, of the American Philosophical Society, and of the Historical Society of Pennsylvania. He had made a considerable number of contributions to scientific literature.

New Occupation for Blind Persons.—It is stated that in Japan massage is practised almost exclusively by blind persons. The idea is that the sense of touch is so much more delicate and developed in those who have lost their vision that the employment of them as "masseurs" and "masseuses" is quite in accord with the natural fitness of things. Blind persons are largely used for this purpose in St. Petersburg, and at a large massage-school there the professor is also blind. Doubtless were the massage-establishments in England to be officered by blind male and female persons the suspicion raised against them that they were used for improper purposes would be removed. But it does not do to be certain of anything in this world.—*Medical Press and Circular*, March 6, 1895, p. 258.

Dr. John A. Ryder, Professor of Comparative Embryology in the University of Pennsylvania and a very distinguished embryologist, died on March 26th, at the age of forty-three years. He was born near London, Franklin County, Pennsylvania, and received a common-school education, later becoming a Jessup scholar in the Academy of Natural Sciences of Philadelphia. He was for a time embryologist to the United States Fish Commission, and made numerous valuable contributions to the art of fish-culture and in other departments of biology. In 1886 he was made Professor of Comparative Embryology in the University of Pennsylvania. He was a strong advocate of the mechanical theory of evolution.

The Tri-State Medical Society of Iowa, Illinois, and Missouri will hold its next meeting at St. Louis, April 2, 3 and 4, 1895. A most extensive program has been prepared, and the meeting promises to be a highly successful one. The society will make the Planters' Hotel its headquarters. A large banquet will be held on April 3d. The various railways have reduced the rates of fare. Intending participants should ask their local agents for a certificate, to be countersigned by the Secretary of the Society.

Meetings of State and National Medical Societies:

	Meets.	Next meeting.
American Academy of Medicine.	May 4–6, 1895	Baltimore.
American Association of Genito-urinary Surgeons.	May 28–31, 1895	Niagara Falls, N. Y.
American Climatological Association.	June 13–15	Hot Springs, Va.
American Dermatological Association.	Sept. 17, 1895	Montreal, Can.
American Electro-Therapeutic Association.	Sept. 3, 1895	Toronto, Can.
American Gynecological Society.	May 28, 1895	Washington, D. C.
American Laryngological Association.	May, 1895	Rochester, N. Y.
American Medical Association.	May 7, 1895	Baltimore.
American Neurological Association.	June 5–7, 1895	Boston, Mass.
American Ophthalmological Society.	July 24, 1895	New London, Conn.
American Orthopedic Association.	Sept. 19–21, 1895	Chicago, Ill.
American Pediatric Society.	May 28, 1895	Hot Springs, Va.
Arkansas Medical Society.	May 1, 1895	Little Rock, Ark.
Army and Navy Medical Association.	May, 1895	Decatur, Ill.
Association of American Physicians.	May 28–31, 1895	Washington, D. C.
Association of Military Surgeons of the United States.	May 21–23, 1895	Buffalo, N. Y.
British Medical Association.	July 30–Aug. 2, 1895	London, England.
Canadian Medical Association.	Aug. 28–30, 1895	Kingston, Ont.
Colorado State Medical Society.	June 18–20, 1895	Denver, Col.
Connecticut Medical Society.	May 1, 1895	New Haven, Conn.
Florida State Medical Society.	April 16, 1895	Gainesville, Fla.
Idaho State Medical Society.	Sept. 9–11, 1895	Boise City, Id.
Illinois State Medical Society.	May 14–16, 1895	Springfield, Ill.
International Congress of Gynecology & Obstetrics.	September, 1896	Geneva, Switzerland.
International Congress of Hydrobalneotherapy.	1895	Ostend.
International Medical Congress.	August, 1896	Moscow, Russia.
Iowa State Medical Society.	April 17, 1895	Creston, Ia.
Kansas State Medical Society.	May 16, 17, 1895	Topeka, Kans.
Kentucky State Medical Society.	June 12–14 1895	Harrodsburg, Ky.
Louisiana State Medical Society.	May 7, 1895	New Orleans, La.
Maine Medical Association.	June 5, 1895	Portland, Me.
Massachusetts Medical Society.	June 11, 12, 1895	Boston, Mass.
Medical and Chirurgical Faculty of Maryland.	April 23, 1895	Baltimore, Md.
Medical Association of the State of Alabama.	April 16–19, 1895	Mobile, Ala.
Medical Association, District of Columbia.	April 2, 1895	Washington, D. C.
Medical Association of Georgia.	April 17–19, 1895	Savannah, Ga.
Medical Association of Montana.	April, 1895	Anaconda, Mont.
Medical Society of the State of California.	April 16, 1895	San Francisco, Cal.
Medical Society of Delaware.	June 11, 1895	Wilmington, Del.
Medical Society of the Missouri Valley.	March 21, 1895	Sioux City, Ia.
Medical Society of the State of New Jersey.	June 25, 26, 1895	Cape May, N. J.
Medical Society of the State of North Carolina.	May 14–16, 1895	Goldsboro', N. C.
Medical Society of the State of Pennsylvania.	May 21, 1895	Chambersburg, Pa.
Medical Society of the State of Tennessee.	April 9, 1895	Nashville, Tenn.
Medical Society of Virginia.	October	Wytheville, Va.
Medical Society of West Virginia.	July, 1895	Elkins, W. Va.
Michigan State Medical Society.	June 4, 1895	Bay City, Mich.
Mississippi State Medical Association.	April 10, 1895	Jackson, Miss.
Mississippi Valley Medical Association.	September	Detroit, Mich.
Missouri State Medical Association.	May 21, 1895	Hannibal, Mo.
National Association of Railway Surgeons.	May 1–3	Chicago, Ill.
Nebraska State Medical Society.	May, 1895	Grand Island, Neb.
New Hampshire Medical Society.	May 30, 31, 1895	Concord, N.H.
New Mexico Medical Society.	July 10, 1895	Las Vegas, N. M.
New York State Medical Association.	October 15–17	New York City
Ohio State Medical Society.	May 15–17, 1895	Columbus, O.
Ontario Medical Association.	June 5–6, 1895	Toronto, Ont.
Oregon State Medical Society	June, 1895	Portland, Ore.
Rhode Island Medical Society.	June 6, 1895	Providence, R. I.
South Carolina Medical Association.	April 24, 1895	Columbia, S.C.
Texas State Medical Society.	April 23, 1895	Dallas, Tex.
Tri-State Medical Society.	April 2–4, 1895	St. Louis, Mo.
Vermont State Medical Society.	October 10, 11	Burlington, Vt.
Washington State Medical Society.	May, 1895	Seatle, Wash.
Wisconsin State Medical Society	June 5–7, 1895	West Superior, Wis.

Meetings of Philadelphia Medical Societies:

	Meets.	Next meeting.
Academy of Surgery,	1st Monday of month, Oct.—June.	April 1
College of Physicians,	1st Wednesday of month, Sept.—June.	April 3
Section of Gynecology,	3d Thursday of month, Oct.—June.	April 18
Section of Ophthalmology,	3d Tuesday of month, Sept.—May.	April 16
Section of Orthopedic Surgery,	3d Friday of month, Oct.—April.	April 14
Section of Otology,	1st Tuesday of month, Oct.—May.	April 2
Section of Surgery,	2d Friday of month, Oct.—May.	April 12
County Medical Society,	2d and 4th Wednesdays of month, Sept.—June.	April 10
Neurological Society,	4th Monday of month, Oct.—April.	April 22
Obstetrical Society,	1st Thursday of month, Sept.—June.	April 4
Pathological Society,	2d and 4th Thursdays of month, Sept.—June.	April 11

BOOKS AND PAMPHLETS RECEIVED.

Medical News Visiting List, 1895. Thirty Patients per Week. Philadelphia: Lea Brothers & Co., 1894.

Mysophobia. By S. V. Clevenger, M.D. Reprinted from the Western Medical Reporter, 1894.